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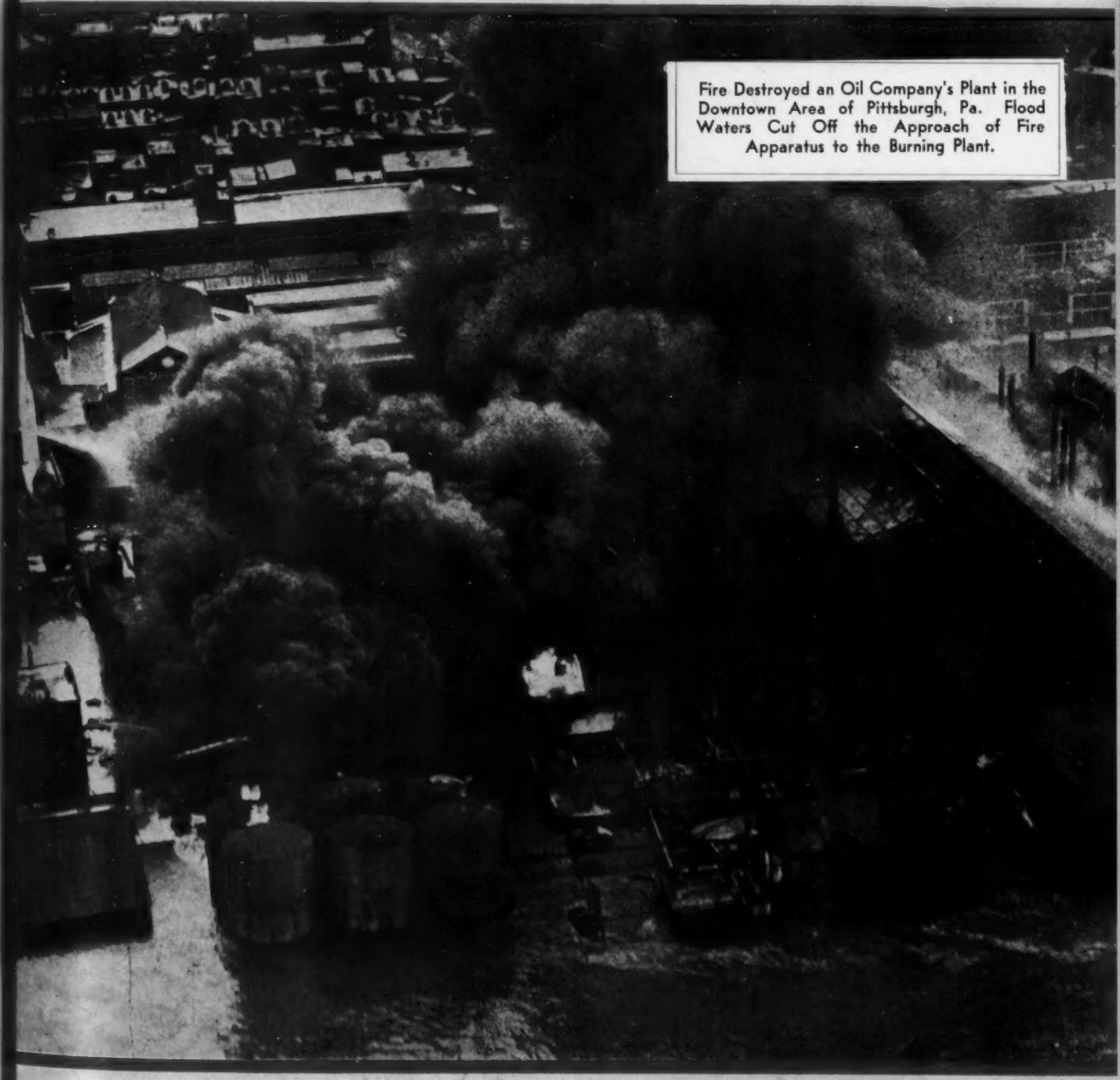
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Vol. 89, No. 4 APRIL, 1936 Member A.B.C.—A.B.P.



Fire Destroyed an Oil Company's Plant in the Downtown Area of Pittsburgh, Pa. Flood Waters Cut Off the Approach of Fire Apparatus to the Burning Plant.

AS a General strategically deploys his forces during battle, men with INDIAN FIRE PUMPS are directed to places of greatest need during brush and grass fires.

Many city and rural fire departments know the value of these portable extinguishers that do such a splendid job of fire fighting under all conditions. That's why they rely on the INDIAN when the emergency is the greatest.

The ever-increasing number of fire departments and state and government forestry patrols equipped with INDIAN FIRE PUMPS is testimony to their efficiency. Using only clear water, and throwing a powerful 50-ft. stream, INDIANS are designed according to foremost authorities on forest, grass and brush fire-fighting.

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Firestone

Builds the

SAFEST • STURDIEST TIRES FOR ANY TYPE OF FIRE DEPARTMENT SERVICE

GREAT metropolitan fire departments, such as New York City's, find that Firestone High Speed Tires far exceed their most rigid requirements. These tires give greater blowout protection, longer non-skid mileage, complete dependability! Where runs must be made on unimproved roads in outlying sections of the city, fire department officials assure super-traction for fire-fighting equipment by specifying Ground Grip Tires—the tires that make their own road.

The Firestone patented Gum-Dipping process prevents internal friction and heat, the greatest enemy of tire life—gives these tires greater strength and flexibility. Two extra layers of Gum-Dipped cords lock the tread to the tire body—permanently!

With lives and property at stake, take no chances. Equip with Firestone for super-safety—for longer, dependable service at lower cost. Specify Firestone High Speed or Ground Grip Tires when ordering new equipment.

Listen to the Voice of Firestone featuring Richard Crooks or Nelson Eddy— with Margaret Speaks, Monday evenings over Nationwide N. B. C.—WEAF Network

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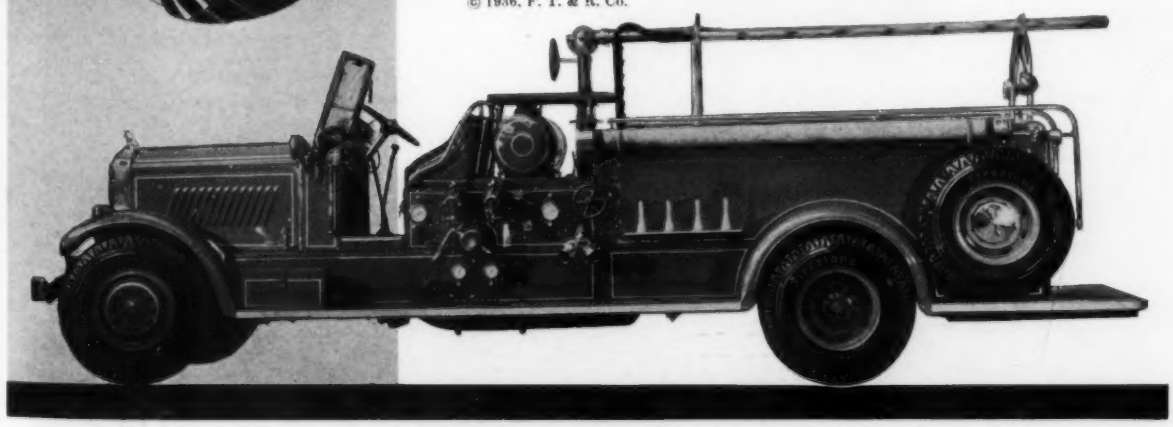
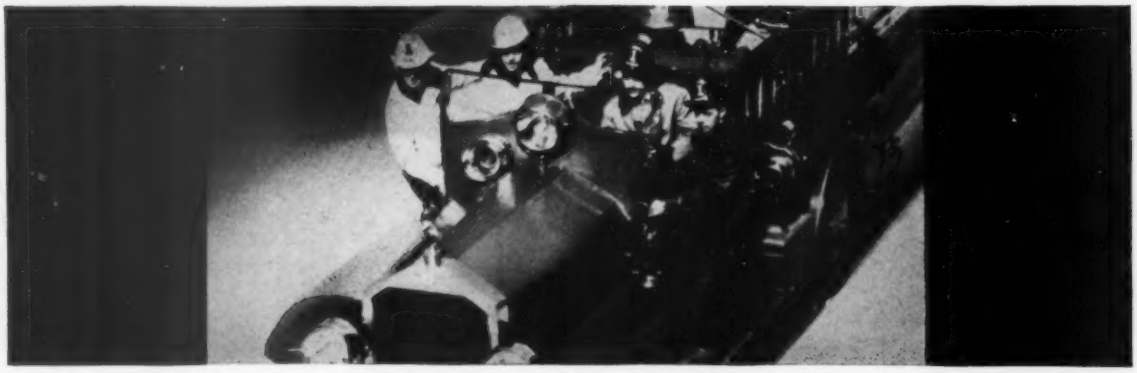


WHAT WILL THEY FIND WHEN THEY GET THERE?



WILL it be a small blaze, easily extinguished? Or a roaring inferno, already beyond control?

Fire fighters will answer this with still another question: *"How soon was the outbreak discovered and the alarm sent in?"* For they know from repeated personal experience that nine out of ten serious fires can be traced either to belated discovery or to delay in sending the alarm.

It is an encouraging fact that among the public, also, there seems to be a growing realization of the importance of the time element in fire protection. Throughout the country, more and more property owners are eliminating the hazards of belated discovery and delayed alarms through the installation of A. D. T. Automatic Fire Detecting and Reporting systems. By thus assuring prompt discovery and speedy and accurate alarms, the fire department is able to reach the scene of the fire in those vital first few minutes that so often spell the difference between a trivial blaze and disaster.

We shall be glad to send descriptive booklets which will enable Fire Chiefs to explain the advantages of A. D. T. Services to citizens who ask their advice on fire protection. Write A. D. T., 155 Sixth Avenue, New York City.

A. D. T. Central Station Fire Protection Services

"AERO" AUTOMATIC FIRE ALARM : : SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE : : WATCHMAN SUPERVISORY AND MANUAL FIRE ALARM SERVICE

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AMERICAN DISTRICT TELEGRAPH COMPANY · 155 Sixth Avenue, New York, N. Y.

A.D.T.

A.D.T. SYSTEM — A NATION-WIDE PROTECTION SERVICE AGAINST FIRE, BURGLARY AND HOLDUP

Effective Fire Fighting *requires* DEPENDABLE HOSE

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RADIO-ACTIVE TREATED MILDEW-PROOF FIRE HOSE IS

DEPENDABLE—effectively protected from mildew, moisture, rot and freezing by an original and exclusive process perfected by Manhattan chemists. Impregnated with radio-active, rare earth metal salts, this hose retains original strength and flexibility throughout its long life.

DURABLE—because of its tough and rugged construction, supplemented by the radio-active treatment, the life of Manhattan Fire Hose is limited only by natural wear or possible accident in use. Careful drying is unnecessary. Manhattan Hose service records of over 30 years are on record.

EASY TO HANDLE—FLAT FOLDING—Manhattan Hose not only assumes a flat shape easily for folding, but retains the maximum strength of fabric when rounded out under pressure, as it has been finally cured in its naturally rounded shape.

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Boston

A Consolidation of FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

ROBERT H. LOCKWOOD
Associate Editor

FRED SHEPPERD
Editor

N. N. WOLPERT
Assistant Editor

A BALANCED DIET

Balance in the diet is mighty important — whether it's your food or your reading. Without this balance, something is neglected.

In FIRE ENGINEERING you get a well-balanced editorial diet, especially and deliberately designed to interest everyone in the fire field — whether their department is large or small, paid or volunteer. No part is neglected. Every issue is crammed full of real worth-while information and ideas you can put to work.

The following letter illustrates our point very well. It's from the Chief of a small department and shows how useful the correct "editorial balance" can be.

> **"We find that FIRE ENGINEERING fits in very nicely with our instruction program and school.**
>
> **"Most courses of fire department instruction are for large city departments which have an unlimited amount of equipment and man power, and are not suitable for the part paid and part volunteer departments where only one or two pumpers are available.**
>
> **"We had been trying for some time to find suitable material for our mostly volunteer organization but had no success until we started reading your magazine."**

"The proof of the pudding," so they say, "is in the eating." The well-balanced reading diet, which FIRE ENGINEERING provides, furnishes the "vitamins" necessary to keep abreast of progress in fire protection.

The Publishers

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*This Tread** BRINGS BETTER PERFORMANCE AND SAFETY TO FIRE TRUCKS

The Improved High Profile Goodyear Truck Tires are better for fire trucks in *many* ways. They are bigger, sturdier, tougher. They mean more dependable service—greater safety.

That improved All-Weather Tread provides greater grip—more non-skid protection on every run, in any weather. And underneath that tread a body of Supertwist Cord protects against blow-outs, provides long life—durability.

It is because of these superior features that Goodyear Truck Tires are preferred by fire chiefs, everywhere—why Goodyears are veterans in fire service: • All-Weather Tread • Supertwist Cord • Extra Strong Bead Construction • High Profile Tread Shape • Heat-Resisting Rubber • Pima Cotton.

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Proved in over twenty-five years' service. Exclusive with Goodyear.

GOODYEAR TRUCK TIRES

GAMEWELL Renders Amazing Emergency Service To FLOOD STRICKEN CITIES

Steadily rising waters of the Merrimac River engulfed the Haverhill, Mass., fire alarm central office for more than three days. Before the waters subsided, they reached a height of 6 feet, 3 inches in this room. Photographer snapped this view through a window while standing in a rowboat outside. Note desks and other material floating in the foreground with repeater and transmitter nearly submerged in the background.

FIRE ALARM SYSTEMS QUICKLY RESTORED TO OPERATING CONDITION

Before rampant waters had subsided in the various flood stricken cities and towns in the entire northeastern section of the country, the complete Gamewell organization, from field engineers to factory employees, had swung into action to help put fire alarm systems back into service.

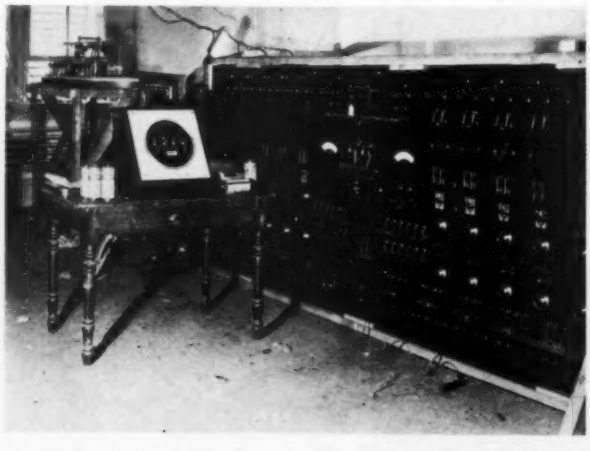
Telephones were out of commission for days in many districts and numerous fire alarm cables and boxes were under water. In one case, a complete central office was submerged.

Frantic calls for emergency fire alarm service, coming in from many sections, were promptly and efficiently handled. One of the first urgent calls came in from Pittsburgh for twenty-five new fire alarm boxes—fifteen were shipped that day and ten the day following.

At Haverhill, Mass., the fire alarm central office was completely submerged in water. Our engineers responded to a call for help, surveyed the situation, and finding the plight of the flooded city extremely bad, delivered to Haverhill *the very same day*, a complete 10-circuit, Class B fire alarm central office *without cost or obligation.*

To Johnstown, Pa., one of our service men was quickly dispatched with necessary repair parts and equipment. To Hartford, Conn., we delivered thirty-one new fire alarm boxes and miscellaneous repair parts within twenty-four hours after the emergency call was received.

Scores of other orders for emergency aid were also handled equally as well inside of a week's time—a remarkable demonstration of Gamewell's ability to give emergency service. Throughout the entire emergency period, Gamewell stood alone in rendering complete fire alarm service to its customers—something no other manufacturer in the field could supply. When buying fire alarm apparatus, every city and town should stop to consider if such emergency service as this will be available to them at some future date.



Emergency fire alarm central office loaned by Gamewell to City of Haverhill, Mass. This equipment was delivered to the stricken city within twelve hours after flood waters went down, leaving their own fire alarm headquarters completely ruined.

THE GAMEWELL CO.
NEWTON, MASSACHUSETTS

FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 89 APRIL, 1936 No. 4

With the Editor

Making Fire Traffic Worse During the past few years traffic conditions near fires have become extremely acute; fire trucks have been seriously delayed in reaching the fire; commercial traffic has become paralyzed in many instances.

To make matters worse, local radio broadcasting stations in increasing numbers have adopted the innovation of giving eyewitness descriptions of large fires during the course of their progress. Thus those motorists who followed the apparatus to the fire, as well as those who spotted it when passing, are being augmented by other car drivers who get the tip via radio.

That Fire Chiefs are already aware of the hazard is indicated by a letter from Chief Richard Lee Smith, of Pittsburgh, Pa., in which he says:

"Under normal conditions when fires occur in certain districts the traffic problem is one of our greatest potential hazards in retarding quick response on the part of our fire apparatus and I for one do not want that hazard augmented by radio stations, who, by their spectacular way of announcing the events occurring at a fire, practically invite our populace to the scene, not knowing or realizing they may be contributing to a catastrophe in their city."

The time for solving this problem is now, when the practice is not general. It's usually easier to prevent a trouble than correct it. As long as the public does not expect to hear fire-fighting broadcasts, the broadcaster would be willing to promise to forego the activity. As a rule, a broadcasting company, if informed of the harm done by such broadcasts, would be willing to cease the practice or refrain from it, if it has not yet been instituted. Such cooperation might eventually result in the saving of much property and maybe many lives.

* * *

Emergencies Do Occur! There seems to be a feeling among many that emergencies may occur affecting other folks but that they will never strike home.

That feeling probably explains why many Fire Departments were unprepared when recent floods inundated cities in the eastern part of the country.

But emergencies of major proportions are not caused only by floods. Broken gas mains, discharging inflammable gas into sewers, wild oil wells, earthquakes and a multitude of other catastrophes may create conditions requiring unusual rescue and relief measures.

There isn't a Fire Department in a large city that may not, sooner or later, be called upon to assume responsibilities as great or greater than those placed upon the Fire Departments of flooded cities during the past month.

Preparation for emergencies is therefore an activity justified in all paid departments, as well as in many volunteer organizations.

Fred Sheppard

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Front and Rear Views of the Van Deusen Inn, Westfield, Mass., After the Fire Was Extinguished.

A Plea for Fire Prevention

Seven Guests of Hotel Might Not Have Died Had Basic Regulations Been Followed for Preventing Fire and Preserving Life

By GEORGE O. MANSFIELD*

TRAPPED within the walls of the twenty-four-year-old Van Deusen Inn, a family hotel located at 44 Court Street, Westfield, Mass., seven permanent guests lost their lives when fire which is believed to have been smoldering for some time, suddenly burst through the walls and ceilings. It was of such intensity that escape was suddenly cut off and the victims perished in the flames. Seven occupants were also so seriously burned that they required hospital attention.

The building was three stories in height, of wooden frame construction with brick veneer. Interior partitions were of wood studding covered with beaver board and ornamental sheet tin. The ceilings were of metal. There were no firestops. Under State regulations, the building was classed as a lodging house and had a state certificate as such. There were two independent stairway exits at opposite ends of the building which furnished egress from all three floors. There were also outside iron fire escapes on the front and rear of the building. There was a fire-alarm system which could be operated and sounded from each floor. Two pony fire extinguishers were on each floor. There were approximately forty-one rooms in the building, of which 29 were used as bedrooms. At the time of the fire, twenty persons were in the building.

Additional Help Called

Fire was discovered simultaneously by several occupants and the Fire Department was called at a street box alarm, which was located on the street directly in front of the building. The Fire Department arrived promptly and immediately, additional alarms were sounded calling all available apparatus and men. The Fire Department's first efforts were to save human life and it acted efficiently in rescuing people from precarious positions on window ledges and piazza roof. Water lines were quickly placed in operation until ten in number, were directed at the fire from all sides. Sufficient pressure was maintained throughout the operations and the fire was confined to the building in which it originated.

Fire was discovered at approximately 10:15 p.m. and the box alarm was recorded at Fire Headquarters at 10:18 p.m. All of the occupants were in their rooms at the time, but very few had retired.

That the fire had been burning within the partitions and between the flooring over a considerable period, was evidenced by the fact that when the fire was discovered, flames were bursting through the ceiling of the first floor and the walls of the second floor in the main corridors, and in spite of warning shouts and the sounding of the inside fire alarm, some of the occupants were unable to get out of their rooms. The rapid spread and intensity of the fire is further shown by the fact that the firemen upon arriving, burst in the front door and found a dead body in the hallway on the first floor of the hotel.

Investigation Started

Detective William Puzzo of the State Fire Marshal's office in charge of this district, arrived during the fire and started immediate investigation, reporting at once to the State Fire Marshal, Stephen C. Garrity, who dispatched Chief Inspector, George O. Q. Mansfield to the scene to assume charge of the investigation. The State Fire Marshal arrived later and took personal charge. Following several days investigation and a fire inquest which was held at Westfield, Mass., during which all persons having knowledge of the facts and circumstances connected with the fire,

* The author is Detective Inspector of the Massachusetts State Police, working under the State Fire Marshal.

were examined under oath, the Fire Marshal made public the following findings:

"I find that the fire was probably caused from sparks which resulted from a metal ceiling coming in contact with exposed electrical wiring thereby creating a short-circuit. This condition was found to exist in the ceiling above a serving kitchen in the basement, and at a point below a first-floor lavatory. There was a discoloration of the metal ceiling, and a close examination at this point disclosed evidence that this metal had been subjected to heat. Two No. 14 rubber-covered wires enclosed in circular loom which ran between the ceiling and the flooring were found to be bare of insulation and loom at a spot directly above the burning on the metal ceiling. At a point above these bare wires there was a soil pipe and trap which went through the floor into the first-floor lavatory. It is believed that sweat or a leakage deteriorated the insulation and caused the wires to become bare. The metal ceiling, in some manner coming in contact with these bare wires, caused a high-resistance ground, which in turn could cause arcing without blowing a fuse.

Tracing the Fire

"The timbers above this point were heavily charred on the under side but there was no burning above. From this point the burning could be traced horizontally a distance of three feet to a point where the burning then extended vertically up between the partitions of the lavatory, the walls of which were covered with metal on the outside and beaver board on the inside. This particular construction apparently held the fire within the partitions until it spread throughout the building on the upper floors. These facts appear to be substantiated by testimony of witnesses who first discovered the fire breaking out of the ceiling above the first floor.

"Further evidence to substantiate the belief that the fire started at the point already mentioned was found in the fact that there was no debris between the ceiling and the floor, thus eliminating the possibility of a drop fire; and also there was no burning in the partition directly above, the fire having travelled horizontally as already mentioned. The circuit of which the wires found bare were a part, was found to be over-fused, and in the entrance cabinet from which this circuit led several blown fuses were found which indicated that there had been previous trouble on some circuit. An examination of all other electrical fixtures and other electrical equipment disclosed nothing of an unusual nature. The heating apparatus was found to be intact.

Fire Prevention Pays
An inspector had ordered a concrete covering for the stairways. The one shown is one of the few parts of the building that were left standing.

Where Fire is Believed to Have Started
Insulation on the exposed wires had deteriorated from sweating or dripping of moisture from lavatory pipes directly above the wires. Metal ceiling, which came in contact with the bare wires, caused an arc.

Fire Department Praised

"I find that the Fire Department responded promptly and that immediately additional alarms were sounded; that all apparatus and available men were quickly at the scene; that the Fire Department's first efforts were to save human life, and that it acted efficiently in rescuing people from precarious positions on window ledges and piazza roof. While evidence shows that the fire had gained great headway, the Fire Department confined the fire to this building."

Three interesting points are brought in reviewing data regarding the fire. A building inspector of the Department of Public Safety, had previously required as a safety measure, that the walls of the interior stairways be covered with cement plaster. The fire proved the wisdom of such a precaution. Both stairways were intact after the fire, and although the parts of the building in the immediate vicinity were destroyed, the stairways remained.

A wooden lined laundry chute served to carry the fire up through the building. This enclosed passageway served as a chimney and conveyed the fire and heated gases from the lower floors to other parts of the building.

A seventy-seven-year-old woman is alive today because of a retentive memory. When fire broke out, she remembered that she had read somewhere that in case of fire, not to open the door of one's room leading to a hallway which was ablaze. She recalled the directions that in such a case, one should bolt the door or move a heavy piece of furniture against it to prevent the door from being forced open should an explosion take place. The woman locked the door and climbed out on window ledge. She was rescued by firemen and escaped without even slight burns. On the opposite side of the hotel, a younger person lost his life because he opened the door of his room and the rush of air from the cool room to the heated corridor, prevented the door being closed.

I. A. F. C. CONVENTION DATE CHANGED

By unanimous consent of Directors the date for the annual Convention of the International Association of Fire Chiefs at Toronto, Ontario, has been changed from July 21-24 to July 28-31. This change was necessary to avoid conflict with District Organization Conventions and will result in bringing out a larger attendance at the Toronto meeting.

Hose Standardization Spreads

Seventeen years ago a movement was started to standardize the specifications of fire hose threads according to what is known as the National standard. Today there are 6,400 cities and towns that have changed over their hose threads to this standard.

Fire Department Abolished

The town of Tyngsboro, Mass., voted on February 10 to abolish its Fire Department, thus dispensing with the services of Chief Harold Dunlap and his twenty-three firemen. The vote was 66 to 62. The sum of $1,600 was appropriated to be used by the Board of Selectmen for fire protection purposes. Local politics are believed responsible for the town's action.

HARRY BELKNAP.

Gases, Chemicals and Hazardous Materials

Part VIII

In this eighth installment is continued the discussion of chemicals and hazardous materials more commonly encountered in fire-fighting. Methods of shipping and handling and their action under exposure to fire are given for most of the materials.

Fighting an Oil Fire by Use of Fire Foam

Didymium Nitrate: This granular chemical is usually found in wooden kegs, in which it is shipped. It is an oxidizing material and classes with sodium nitrate. In the presence of fire it throws off oxygen which increases the intensity of the fire. It constitutes no life hazard, but in storage should be isolated from other combustible materials.

Ethyl Chloride: This is a volatile inflammable liquid. It flashes at ordinary temperature and burns with a bright flame, edged with green. It is used in refrigerating systems for domestic, hotel, store and similar use. Ethyl chloride, being a volatile flammable liquid, is dangerous in mixtures with air, if brought in contact with any source of ignition, in which case fire or explosion may result.

Ethyl Nitrate (or nitric ether): A colorless inflammable liquid with pleasant odor and sweet taste. It is usually found stored in small quantities, due to explosion possibilities. Its vapors explode when heated, and it should be kept in a cool place and away from all flame.

Dynamite: Dynamite is an explosive preparation containing nitroglycerine, and a carrier such as soft earth, or some combustible absorbent. Nitro-glycerine alone is extremely dangerous to handle, but when mixed with the absorbent, it is not so sensitive to shock. The explosive is sensitive to freezing, and if after freezing the nitro-glycerine leaks out, or separates from the carrier, it is very dangerous. Experience and care are required in the hazardous operation of thawing. Exposure to direct sunlight is to be avoided. While small quantities of loose dynamite have been known to burn quietly, fire is likely to cause explosion.

Formaldehyde: When found in liquid form, this substance, which is normally a gas, is a colorless liquid. It is employed chiefly as a disinfectant, also as a fungicide on vegetables and plants. Combined with phenol and cresol, it forms important condensation products, among which are bakelite. Its chief fire hazard is due to the use of wood alcohol in its preparation.

Formic Acid: This acid, which is shipped in barrels and carboys, is flammable, and gives off flammable vapors which may form explosive mixtures with air.

It is corrosive and seriously burns the skin or flesh with which it comes in contact. Men operating at a fire where it is encountered should take care to protect their bodies against contact with formic acid. It should be safeguarded against mechanical injury in storage.

Fulminate of Mercury and Fulminate of Silver: A "fulminate" is a material which explodes on compression or shock. More particularly, it is a salt of fulminic acid or a compound containing such a salt, and prepared for use in exploding other explosives as in ammunition, fireworks, or blasting charges.

Fulminate of mercury is one of the most hazardous compounds known. When dry it is so sensitive to heat, friction or shock that only very small quantities should be allowed in one place, and should be protected in every possible way against accident or fire. In its preparation with other materials for percussion cap fixtures, the work of mixing is carried on in an isolated small building, with remote control of the machinery employed.

Fulminate of silver has almost parallel characteristics. Both are classed as high explosives.

Hydrochloric Acid: This acid also goes under the name muriatic acid, chlorohydric acid, and hydrogen chloride. It is a clear, colorless or slightly yellow liquid, fuming, pungent, and poisonous. The life hazard of the material is that of a corrosive liquid, while that of manufacture is that of the fire heat or other arrangement for stimulating reaction. The acid is widely used in industry and in chemical manufacture, and is relatively cheap. It is usually transported and found in carboys or wooden tanks lined with rubber. It has no distinct fire hazard by itself, but it constitutes a real life hazard due to the corrosiveness of its fumes or gases, which are poisonous when inhaled. In storage it should be safeguarded against mechanical injury, and kept away from nitric acid and chlorates.

Nitro Aniline: This material is shipped in wooden kegs. In the presence of moisture it causes nitration of organic materials and may result in spontaneous ignition. It is not corrosive, but it is poisonous if taken internally.

It should be stored in a dry place, and safeguarded against mechanical injury.

Nitro-Chloro-Benzine: This material is shipped in wooden kegs, and gives off flammable vapors when heated, which may form explosive mixtures with air. It presents a serious hazard under fire conditions, but the fumes of it are not poisonous.

In storage it should be isolated, preferably in the open. If inside, it should be in unheated compartments or buildings.

Nitroglycerine: This highly explosive material is a pale yellow, thick liquid. The material is occasionally used for blasting, as in deep wells, but for the most part it is used in the manufacture of dynamite. On account of its extreme sensitiveness to shock or fire, it is a very dangerous material.

Phosphorus Sesquisulphide: This material, which is usually shipped in wooden boxes, iron drums and glass bottles, is highly inflammable and ignites by friction. When exposed to fire it throws off fumes which are toxic. For that reason, thorough ventilation must be provided where this material is encountered. In storage it should be isolated from chemicals, and safeguarded against shock.

(To be continued)

Fire Protection of Hotels

Seven thousand hotels and about 2,200 Chiefs throughout the United States and Canada will receive a new booklet on "Fire Prevention and Protection as Applied to Hotels," which is being distributed by the National Board of Fire Underwriters, 85 John Street, New York, N. Y.

According to a survey that was made five years ago, there were 25,950 hotels in the United States with a total of 1,521,000 rooms.

The publication presents information on maintenance, common hazards, construction and exit facilities, lighting, heating, fuel storage, power plants, kitchen, repair shops, laundries, exhibition of motion pictures, etc.

It advocates the maintenance of a fire brigade in the hotel to aid in the orderly evacuation of the building in case of fire, to carry on fire fighting until the Fire Department arrives, and to assist the local Chief.

Example of How to Save Photographic Evidence for Presentation When the Case is Taken to Court

Left, the wrong way to do it. The room was cleaned up and all the evidence removed before the picture was taken. Right, the right way to preserve a set up. A photographer was called in to take a picture of the set up before there was an opportunity to have any changes made, intentionally or otherwise.

The Crime of Arson

Third Article of a Series Which Will Cover the Detection of Incendiarism and the Preservation of Evidence

By GEORGE O. MANSFIELD
Chief of Fire Investigation, Massachusetts State Police

TRAILERS, "touch-offs" and separate fires are important evidence if a case is to be taken to court. Photographs should be taken before the original set-up is disturbed. Care should be exercised in extinguishing the fire with a view towards not disturbing trailers and traps, and to extinguish separate fires before connecting trailers are destroyed.

A strict watch should be kept over the premises until such time as the photographer arrives and takes the necessary pictures, being sure to include everything of importance in the photographs. If a photographer cannot be readily secured, and there is danger of evaporation of any liquids employed, samples should be taken promptly. A sponge or rag can be used to sop up liquids that may be spread about the floors.

After the photographs have been taken, the liquids or chemically-soaked rags or other materials should be collected and placed in air-tight containers. A glass jar with screw cap and rubber ring is preferred because glass will not be affected by the liquids, and the contents which will be used in court later can be retained for a long period. Take a generous supply and do the same with trailers.

Abundance is better than a small amount because it will be impressive before a jury. As for example, in a particular case I have in mind, an entire mattress was brought to court because evidence of straw from the burned mattress was found upon the clothing of the suspect when arrested, it being the contention of the prosecuting officer that the suspect carried the mattress from a bedroom on an upper floor to a closet where the fire started on the main floor.

Save Evidence

A very close examination should be made of any materials used as trailers because similar articles may be found in the suspect's home or place of business or employment. As for example, a laundry mark on an old shirt was traced to the suspect; wrapping paper and string were found to be the same kind as used in the store of the suspect; trousers found saturated with gasoline at a fire matched the coat and vest in the suspect's home; torn letters, pieced together were traced to the suspect; an electric light bill envelope was found with suspect's name and address; sheets of paper torn from note book matched a book found upon person of suspect.

A pile of kindling wood placed under the window of the house was found to match with the wood at the home of the suspect; wood used to make a tilt on which a bucket was suspended to tip over when string burned off, matched with wood found in the barn of the suspect. As a matter of fact, the grain of the wood was matched in the same way as the ladder evidence in the Hauptmann case.

Containers

Where inflammable liquids have been used, look for containers such as bottles, jugs, jars, etc., because in most cases the liquid will be brought to the scene by the suspect. If any are found, handle carefully to prevent fingerprints thereon from being destroyed or new prints being put on through handling. Articles should be picked up with a gloved hand or handkerchief, or better still, tie a string around the article and pick up by means of the string. Have articles first examined for fingerprints and then, if prints are discovered, have a competent fingerprint expert photograph for checking later. Next, try to trace the source of the article in an effort to connect it with the suspect.

In the case of the lard-tub, for ex-

ample, found filled with gasoline, the tub was traced from the packer in Chicago to the retailer in Fall River, Mass., where the retailer remembered selling six empty tubs to the suspect. Five other tubs were found in his barn. Make an immediate check to ascertain where liquids were obtained, canvassing garages, filling stations, stores, paint shops and places where such articles may be sold. Types of gasoline may now be traced by color, flashpoint, and specific gravity. That is to say, oil companies can by laboratory test, recognize their own products.

Where inflammable liquids had been used and you have a suspect, locate him at once and check him for odors of the liquid. Examine his hands and shoes, because many times they neglect to remove such evidence. If his garments have odors, remove the garment and place it in an air-tight container to be used as evidence. In one case which occurred a few years ago, where three lives were lost, the suspect's coat-sleeve had an odor of gasoline. An officer cut the sleeve right off. All articles taken as evidence should be plainly tagged with a complete record of the circumstances, especially the name of person who first found it.

A Picture that Will Convey More Than Words in Court

A newly made opening was found by firemen in the ceiling of this house. Metal lathe and plaster had been pulled down and straw had been placed between the ceiling and an upper floor.

Fingerprints

If fingerprints are found on containers, they will be of great value in the possible solution of the crime. It may be proven that the suspect handled the articles by comparing the prints on such a container with the prints of the suspect. If there is no suspect and prints have been found, a check in the Bureau of Identification may disclose similar prints already on file, because many times persons who set fires have a previous record. In one case in particular, fingerprints found on the chimney of a lantern, were found to compare with those of a man who was already in jail, for another theft where he had broken into a building, stolen antiques and set the fire to cover up theft.

Only a Camera Can Hold a Set Up Evidence

Footprints

Footprints may sometimes be found, especially in soft ground or in the snow. If such footprints are found, they should be closely protected until a photograph or cast is taken of the same. A plaster of Paris cast is the most efficient method of taking a footprint record and a simple one. Merely prepare some plaster of Paris, pour it into the footprint mold, allow it to harden and you have a perfect cast.

Tire Prints

Tire prints may also be found where the perpetrator of the crime has used a car which was parked close at hand. These prints are taken the same as a foot print. The type of tire can be identified by the type of tread. If there are any unusual distinguishing marks, such as a cut or worn portion of the tire, and there is a suspect in the case, an examination of his automobile may disclose that the tire on this particular car left the print found at the scene.

Confessions

A suspect, when quickly apprehended, may break down and confess. If he is willing to talk, get the

Save the Contents of Bottles

A large glass bottle was found in a bedroom. It had dregs of gasoline. Similar bottles were used by the owner at his place of business. Fingerprints found on the bottle proved the same as the prints taken when the suspect was arrested.

statement at once. Allow him to write his own confession if he will. Of course the rules governing confessions in any crime are applicable in the case of a fire. It must be voluntary and not secured by threat or offer of promise or reward. If you secure a confession, however, never allow a case to depend upon a confession alone. Corroborate the confession by an actual re-enactment of the crime as nearly as possible; that is to say, have the suspect go over the ground and point out his various acts, so that in the event that he later attempts to repudiate his confession, the confession having been corroborated, will hold when presented in court. After securing a confession of a particular fire, then endeavor to secure confessions to previous fires.

Dying Statements

There may be cases where persons are seriously burned in a fire which has been set. Such persons may have valuable information as to who set the fire. As there is always danger of death quickly resulting from serious burns, statements from the injured person or persons should be secured immediately.

Dying statements, in order to be admissible in court, must be made by a person who realizes that he or she is about to die and has given up all hopes of recovery. A statement given under such condition would be good in court after the maker's death as evidence of the maker's death. Dying statements are admissible only as to the party's own death. If the suspect can be apprehended, he should be confronted by the witness for the purpose of identification and any statement made by the injured person in the presence of the suspect would be admissible in the court and better than a dying person's statement.

The movements and whereabouts of the suspect should be checked at once. To accomplish this, talk to everybody available in the vicinity, such as nearby residents, watchmen of nearby buildings, milkmen, street sweepers, taxi drivers, railroad employees and any others who might have been about at the time of the fire.

Preserving a Picture for Future Study

Fire which broke out in the kitchen looked very much like an accident. A careful inspection of the premises by firemen, disclosed a second fire in the buffet in the dining room. Fire had burned itself out because the door of the buffet had been closed too tightly, and there was insufficient oxygen to support combustion.

Toronto Has Two 2-Alarm Fires

Two two-alarm fires which broke out in Toronto, Ont., at about the same time, called out most of the apparatus and caused a $100,000 loss.

A telephone call was received at 7 p.m., for an old mill type building, brick construction, four stories high. The first companies found smoke and flames issuing from the fourth floor. Platoon Chief Fox sent in a second alarm which brought Chief George Sinclair.

Fire was fought from the front and sides of the building. Four high pressure streams were used on the east side of the building, six 2½-inch lines on the west, four 2½-inch streams on the south, and several more lines from the roofs of adjoining buildings.

Chief Sinclair, Platoon Chief Gunn and eighteen men narrowly missed death when the south wall collapsed.

High pressure lines were ordered shut down at 8:15 p.m., at 9 p.m., the second-alarm companies were ordered back to quarters, and the fire was struck out shortly before midnight.

The third and fourth floors of the building were badly gutted, and the lower floors were considerably damaged by water.

The department was greatly aided by a battery of floodlights, and emergency crews from the gas and electric companies. Thirty covers were spread by the salvage company.

While the department was at work on this fire, smoke was found issuing from a two-story frame building, occupied by the Balmy Beach Canoe Club. The club house was built over the boathouses at the water's edge.

Fire was discovered by a member who ran two blocks to turn in an alarm. District Chief Smith who responded with the first alarm found dense clouds of smoke issuing from the entire building. He sent a second alarm which brought Platoon Chief Gunn and District Chief Poole. The men were compelled to don gas masks to enter the building.

Long hose lines, dead end water mains, and ice made it difficult for the men. Twenty minutes after the fire had started, the building collapsed, and Chief Gunn and his men had to jump to safety. This was the second narrow escape for Chief Gunn in thirty minutes. The fire was fought from all sides, and even from the surface of ice-covered Lake Ontario. The fire was out in four hours.

J. K. Lee.

PROMOTIONAL STUDY COURSE

Herein is presented a series of definitions, questions and answers, designed to aid fire department officers in preparing themselves for promotional examinations. In this department, which appears monthly, wil be included questions typical of examinations held throughout the country.

Definitions

Mercantile Establishment: Any place where goods, wares or merchandise are offered for sale.

Concrete: Mortar in which is embedded broken stone, gravel, or some other hard material. The broken stone, gravel, etc., is known as the "aggregate." The entire mass when solidified forms an artificial stone of great strength.

Laths: Thin strips of wood, usually employed as a base for plaster walls and ceilings.

Trimmer-beam: A floor beam run from a wall and supporting the ends of a joist or rafter. Usually refers to nearest beam to chimney breast and used to support the trimmer-arch.

Trimmer-arch: The arch between trimmer-beams used to support the hearth of a chimney.

Questions

(To be answered in next installment)

1. How would you determine the cause of the following motor troubles? (A) Engine fails to start. (B) Motor starts, but fires only few times. (C) Motor knocks.
2. Give four common causes of fires resulting from carelessness?
3. You arrive at a spreading fire in the vicinity of a large school in session, and it is apparent that the blaze will develop into a severe one. Outline your procedure, particularly with reference to the school.
4. State your method of procedure in removing lath and plaster ceiling in a small room for inspection of concealed spaces.
5. What is the chief hazard in connection with fire in motion picture projection booth in small moving picture theatre?

False and True Questions

(Is each statement false or true? Answers in next installment)

6. T F—For a fire in the gas meter room of an apartment house, the gas supply should be shut off immediately from the meters by shutting the valve in the gas service located in the sidewalk near the curb and the fire remaining should be extinguished by chemical or other small streams.
7. T F—When the ventilation of an entire building is necessary in addition to other measure taken, the windows should be pulled down all the way from the top.
8. T F—When the ventilation of only one room is necessary, the top window sashes should be pulled down three-quarters or one-half of the way and the bottom sashes should be pushed up until both sashes are even.
9. T F—It is quicker to stretch hose up a stairway to the seventh floor of a building than up the outside of a fire escape to the same floor.
10. T F—Foam extinguishers are the most effective to use on various fires.
11. T F—Steam pipes can cause fires.
12. T F—The farther the base of a ladder is placed away from a building, the greater the load it can safely carry.
13. T F—Firemen stationed on the lee side of a building from which ammonia is escaping should not be particular in providing a means of escape.
14. T F—Problems of repairing of building after fire need be given no consideration by firemen when working at a fire.
15. T F—Exposures adjacent to the fire building must be given consideration in connection with the work of ventilating.
16. T F—Hose left lying in hot water is not likely to suffer injury.
17. T F—Best results are obtained by siamesing streams as near the engine as conveniently possible.
18. T F—Ability of neighboring construction to withstand heat need not be considered when covering exposures.
19. T F—Many substantially built buildings are fire hazards due to their window requirements.
20. T F—Cutting holes in the deck of a burning ship is sometimes resorted to in an endeavor to extinguish fire below or in the "tween-decks."
21. T F—Sprinkler system feed pipes are arranged to permit adequate supply in accordance with height and area of building.

Completion Statements

22. The two cellar pipes most commonly used in fire departments are the ..... and ..... cellar pipes.
23. Two means of protecting window openings against exposure fires are ..... and .....
24. Failure to ventilate over a stair well when fire is burning therein may result in .....
25. A hazard present in most chocolate factories is the .....
26. One handicap to efficient fire fighting in a large floor area divided up as offices is .....

Answers to Questions in Previous Installment

1 If there is immediate danger to life at the second fire, the company commander should stop, have a man send in an alarm, and notify fire alarm headquarters what has been done, so that another company may be sent to the original fire. He should get his company to work at second fire to save lives and perform other work as needed.

If the second fire is not serious from the standpoint of life hazard, then one man should be dropped off at second fire to pull an alarm and do what he can until arrival of apparatus; in the meantime the company should proceed to the original fire.

2. Stop at the fire so discovered, and call additional apparatus if required. Notify fire alarm headquarters immediately of actions. Operate at fire until it is extinguished, or until ordered back to station by superior officer.

3. Shut off, or have shut off, the power from the trolley wire if possible. If not possible, or if it cannot be done as quickly as necessary, then the line will have to be cut with the power on. Use ladder, and properly insulated wire cutter. Cut wire close to supports, first on the end nearest source of power; then cut the wire at the other support (farther away from source of power). By this method the end of the wire which drops to the street will be "dead." However, permit no one to touch fallen wire until it has been cut at both ends.

4. Problem (which is exactly as given in a fire department promotional examination) does not state height of building. Student is therefore free to assume height. Assume height as four stories. Then procedure is as follows: Order water shut off; disconnect line at street at next coupling to building. Insert good length of hose. Draw line up on roof, and take out burst length. Recouple up again and let the hose come back over roller and make it fast with rope, as it was before.

5. Upon arriving at the fire, and selecting the hydrant, place the pumping engine slightly ahead so that if necessary another machine may be drawn up in the rear and connected to the same hydrant. When the pumper has been properly located, apply the emergency brake and see that it is securely locked. Make sure the gear-shift lever of the road transmission is in the neutral position, and locked, so that this lever cannot be shifted by the pump when in operation. Next make sure that the pump drain cocks are closed. Then connect suction to engine and hydrant, making sure that the rubber gaskets are properly inserted in the couplings, and that the latter are tight throughout the entire length of the suction from pump to hydrant. This is important, as any air leak in the connection will seriously interfere with the delivering of water. See that connections not to be used are properly capped. Having connected up the suction and guarded against any and all possible air leaks, next attach hose to such discharge gates as are to be used. Close all discharge gates to which hose is not attached and open those which are connected with line. If the motor was shut down after bringing the car into position, it should again be started at this point and the pump transmission gears engaged. Practically all pumpers employed in large cities as well as most of them employed in medium sized cities have two speeds. These are known as "pressure" and "capacity" and are controlled by a single lever. Lever

may be so arranged that raising it vertically releases the clutch, while a horizontal movement toward either the rear or front of the car shifts the pump gear into mesh. Lowering the lever engages the clutch, and starts the pump. For discharge pressures of less than 150 pounds "capacity" shift is used whereas for pressures of over 150 pounds the "pressure" shift is employed. With the type of pump referred to above (American La-France) pump gear shifting is accomplished by lifting the lever and moving it either into "capacity" or "pressure" side of gate as required, and lowering the lever slowly at the same time opening throttle slightly as the motor picks up the load of the pump.

6. True; 7. True; 8. False; 9. True; 10. True; 11. True; 12. True; 13. True; 14. True; 15. True; 16. True; 17. True; 18. True; 19. True; 20. False; 21. True.

22. . . . metallic dusts in the air.

23. . . . shut-off. . . .

24. . . . incomplete combustion.

25. . . . when a hot blast strikes it, it will not open up, even though the glass cracks badly.

26. . . . water thrown on calcium carbide produces acetylene gas.

Questions with Answers

Question: What instructions would you give a new recruit in regard to the following?

(A) Handling and operating pipes and nozzles.
(B) Entering a building charged with smoke.
(C) Siamesing lines of hose.
(D) Handling roof lines.

Answer. (A) Be careful with nozzles and pipes. A dented or burred nozzle means a defective stream.

In operating shut-off nozzle, open and close the nozzle slowly. A sudden closing of nozzle may cause water hammer of sufficient intensity to burst hose. Opening nozzle quickly when under high pressure, may result in hose line getting away and doing damage.

In operating pipes and nozzles at fires, direct the stream so that the water will do the most good. Keep the stream moving, and not operating at one point. Do not use water until fire is actually seen and when stream is used, so direct it that, if possible, it will strike the materials which are burning. If operating at a dangerous place, and if short of help, hold the nozzle or pipe against some firm object to prevent its getting away. If necessary, use hose straps to secure the line.

(B) In entering a building charged with smoke, keep as low as practicable. Bear in mind the way you will get out in an emergency. Look out for open traps, chutes, and other openings in floors. Coolest air is always closest to the floor, and in the event of smoke becoming unbearable, get down near the floor. When operating a water line, the air nearest the stream will be the coolest and freshest. If lights go out, and you are not sure of your bearings, but must find your way out, follow the hose line out to the street. If working on a line, do not open up until the fire itself is seen.

(C) Siamesed lines are required where the stretch is long, and where an effective stream is desired. The effect of running parallel lines is to reduce the friction loss in the layout greatly and thus leave more pressure available for delivery of the stream at nozzle. Siamesed lines are also employed for medium length stretches where large diameter nozzles are to be employed.

Siamesing should be done near the fire, the parallel lines being run from the source of supply to a point near the fire. Only enough single line from the siamese to the building should be employed to give flexibility of the line for use within the building or on the street in front of the building. If two lines leading to the siamese fitting are supplied by different engines, and if these lines are the same length, it is desirable to maintain pressure at both engines as nearly uniform as possible. On the other hand, if one engine is farther away from the siamese than the other, the pressure at the more distant engine should be greater than that of the nearer.

(D) Protect hose where it crosses cornices by use of hose rollers, or other protective devices. Support hose line which is being employed on the roof of a building by rope attached to some secure object on the roof. This will prevent hose slipping to the street and at the same time remove a serious hazard to the hosemen. In the event that the roof is slippery it may be necessary to secure line near nozzle so that there will be no chance of line under pressure endangering the men unnecessarily. As men on the roof are frequently out of contact with the man at the pump, this precaution is very essential, as excess pressure may be delivered and thus make the situation of the men very hazardous.

(To be continued)

Todd Family Presents Medal

As a memorial to one of the staunchest friends the members of the New York Fire Department had, the William H. Todd medal for valor has been endowed and will be presented for the first time this year, it was announced by Fire Chief and Commissioner John J. McElligott.

The medal is a gift of J. Herbert Todd, Mrs. Charles P. Monahan and Mrs. Thomas R. Lilly, son and daughters of the late William H. Todd, shipbuilder, volunteer fireman, and honorary Deputy Chief of the New York Fire Department, who died four years ago.

Chief Todd's enthusiastic interest in the welfare of the Fire Department and his benefactions to fire fighters generally will be kept fresh in the spirit of the fire service by the annual presentation of the medal in his memory. Appropriately, the first presentation will be made next summer at City Hall by William H. Todd, the twelve-year old grandson of the Chief.

The medal is of 18 kt. gold and is designed in the form of a cross with the shield of the City of New York in the center. The four blades or wings of the cross are encircled with a ribbon of gold on which is inscribed "Fire Department, City of New York."

The arms of the cross are symbolic of the rays of the sun interspersed with gold "flames" indicating fire. The outside of the cross represents an oak wreath signifying strength. The reverse side of the medal has an inset which will provide for the inscribing of the name of the winner. It contains the Latin phrase "Defensio Non Verba," the Todd family maxim. All the lettering is in relief.

William H. Todd's affection for the fire fighters started in Wilmington, Del., where as a young man he was a member of the famous old "Reliance Fire Co. No. 2." For years he led the Washington Birthday Parade of volunteer firemen in Brooklyn, and on those occasions brought as his guests from Wilmington all his old fellow firemen.

Fire Commissioner McElligott in his letter to J. Herbert Todd accepting the gift, expressed the gratitude of the members of the department and paid an affectionate tribute to the memory of Chief Todd and his interest in the welfare of the firemen.

WM. JEROME DALY.

Fireman Killed by Nitrate Blast on Boat

One fireman was killed and several were injured when a series of explosions occurred in the hold of a nitrate-laden vessel which docked at Baltimore, Md., with 5,000 tons of nitrate.

All the city's fireboats stood by, and land apparatus was brought as close as possible to the boat during this five-alarm fire. Tugs were unable to move the boat from its dock but ships at nearby piers were successfully towed to safety.

A crew of thirty men and the captain were on board the boat when the fire started. The sailors fought the fire until it got beyond control and they were forced to flee.

Front and Reverse Sides of William H. Todd Memorial Medal to be Presented by New York Fire Department

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

SUPERVISION OVER AUTOMATIC SPRINKLERS

SPRINKLER systems, since they are a means for bettering fire protection, have generally come under the jurisdiction of the Fire Department.

Officers and men are schooled in the location of all inside and outside valves of systems in their respective districts so that valves may be operated with the least possible delay.

In the box on this page is the problem in full that is discussed in this issue. It is a continuation of the problem published in the previous issue. In the box on the following page is the question that will be discussed in the next issue.

Discussion of the Question

William J. Sudeith, Chief, St. Paul, Minn.: On new installations, a complete test is made with the General Inspection Bureau, and a test is made of the siamese connection on outside walls to see that the connection has a thread that will fit our hose. We also test all inside standpipe connections for Fire Department use. Where the system has city pressure, we test the pressure at each floor outlet.

All officers are instructed to familiarize themselves with the workings of all sprinkler systems in our city. They must know whether a particular system takes care of more than one building. Each company has a plan of the sprinkler systems in their district, and these drawings show in detail everything in connection with the system. Tests are made at regular intervals to see if the electric alarm system is working properly.

James J. Evans, Chief, Everett, Mass.: In compliance with the General Laws of the Commonwealth, the Fire Department keeps close supervision of all sprinkler systems in the city. No system can be shut off without a permit issued by this department.

Our Fire Prevention Bureau works in close harmony with the inspectors from the New England Insurance Exchange. All sprinklered risks are carefully supervised.

We inspect all systems but do not test them. That is done by the New England Insurance Inspectors. We pay particular attention to the piping of stock, etc., so that there will be no interference with the proper operation of sprinkler heads. We watch to see that no system is shut off without a permit.

The company officers are all familiar with sprinkler systems in their districts, particularly where they are the first companies in.

Fred A. Taylor, Chief, Colorado Springs, Col.: Our Superintendent of Fire Alarms makes a periodical inspection of all sprinkler systems, making a test on the connection to the fire alarm.

Our fire warden also makes monthly inspections of these systems, checking the air and water pressure on dry pipe systems, and the water pressure on wet pipe systems. He also checks all valves, etc., making sure the system is ready to function.

Owing to the fact that we have excellent pressure on our water system, none of the sprinkler units have fire pumps or storage tanks. All are supplied from the municipal systems. All officers are acquainted with the location of outside connections, control valves, drain valves, etc.

E. E. Leffen, Chief Engineer, San Bernardino, Cal.: At the present time there are four automatic sprinkler system installations in this city, each with its own alarm signal system, which is not connected to our Gamewell system.

These sprinkler systems are inspected and tested by our fire prevention inspectors and officers.

Company officers are periodically taken through their districts on inspection tours and are shown the fundamental operations of the entire sprinkler systems, and they do the testing. Installation blue prints are kept on file at headquarters for study purposes by the officers.

B. O. Hargrove, Chief, Birmingham, Ala.: We maintain very little supervision of sprinkler systems, other than cooperation with the Building Department at the time of installation. We carry a reserve supply of heads to make replacements at once. We see that the system is back in service immediately after a head has fused. Company officers and men are required to know the location of all outside connections, the kind of system installed, etc. Our inspectors see that no obstructions are placed too near the sprinkler heads so as to interfere with the operation of the heads.

I consider it very important and necessary for firemen to know all about sprinkler systems, their mechanism and just how they operate.

John Parker, Chief, San Angelo, Tex.: The systems are inspected by all company officers and men so that they may be acquainted with the location of all connections.

J. L. McClure, Chief, Wichita Falls, Tex.: We have no authority to service or supervise any sprinkler system, except those that are in series with our fire alarm system. However, I am sure all such systems should come under the supervision of a qualified Fire Department Inspector who, in turn, would instruct other members in vocational classes or schools.

We inspect, and see that all supply valves are opened and sealed.

Henry R. Taft, Chief, Norwich, Conn.: We take no part in the supervision or maintenance of automatic sprinkler systems. We check on them when we make inspections of a building where there is a sprinkler system, but we do not test them. We always notice whether the water is turned on the system, also that the inspection seals have not been broken.

The officers know the location of outside connections, control valves, pumps, electric system, etc. Wherever there is a new installation of a sprinkler system, we make an effort to be present at the acceptance test.

Grover Frock, Chief, Springfield, Ohio: The only supervision that we maintain is that of inspection by the various company officers in their respective districts. Local A.D.T. inspectors look after the testing of those systems that have their service.

We inspect the systems monthly but the tests are made by employees of the buildings.

It is the duty of all officers to know the location of all valves and shutoffs in their districts, as well as to see that the company members are acquainted with the layouts.

At the monthly meetings of officers, we discuss facts regarding these installations in the various districts. We have on file detail drawings of all of our sprinkler systems.

J. C. McNally, Chief Engineer, Somerville, Mass.: The commanding officers

HERE IS THE PROBLEM

What supervision do you maintain over automatic sprinkler systems?

Do you inspect and test them?

Do company officers know the location of outside connections; of control valves; of fire pumps; and whether the system is supervised by a suitable electric system?

and men of the several stations inspect the sprinkler locations in their respective districts. A District Chief also inspects all public buildings including sprinkler systems.

In addition, when permission under Chapter No. 283 is applied for, to discontinue the system, a Chief always inspects the layout before permission is granted.

Charles A. McGinley, Chief, East Orange, N. J.: Periodical inspections are made of all the sprinkler systems in the city by department members.

A record card is made out for each inspection by the man making the inspection. This card is placed on file in the office of the Chief.

Not only officers but all members of the company in the district have knowledge of sprinkler installations. Each member is detailed from time to time to familiarize himself and to inspect sprinkler and standpipe setups. All control valves are properly tagged and outside connections are watched for signs of corrosion. We see that proper washers are in place and the connection is not obstructed. All sprinklers are supervised in and out with the bell alarm systems, except in a few minor installations.

William J. Lutz, Chief, Wilmington, Del.: The city plumbing inspector issues permits for installing systems and he inspects those that are installed.

The Fire Marshal's office force inspects the system but does not make any tests. The Fire Bureau makes the tests upon request.

Company officers inspect all buildings and they are familiar with all types, outside connections, control valves, pumps, drain valves, etc. The Underwriters always notify the department regarding any and all tests of sprinklers.

Hugh R. Etzell, Engineer, Long Beach, Cal.: The Bureau of Fire Prevention maintains supervision over automatic sprinkler systems. The Fire Prevention Code requires that the Bureau enforce all laws and ordinances of the state, county and city regulating "the installations and maintenance of automatic and other fire alarm systems, and fire extinguishing equipment. All systems required by ordinance must comply with the regulations of the National Board of Fire Underwriters."

Sprinkler systems are inspected and tested by the Bureau of Fire Prevention.

Company officers know the location of all outside control valves, inside control valves, and Fire Department connections. They also know the location of control valves on private fire pumps. All private pumps are tested each year by the Fire Department. Company officers have knowledge of electrical supervision systems. Private systems serving hose lines are tested annually.

H. G. Putnam, Chief, Winona, Minn.: We maintain no supervision over the sprinkler systems in our city. It is taken care of by the Underwriters' Inspection Bureau.

Not only the company officers, but every man in the department knows the location of control valves and everything pertaining to the operation of the different systems. All firemen take turns in inspecting buildings. We consider it most important that they become acquainted with the systems.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What is the principal water supply to sprinkler systems in your city?

If from water mains, have tests been made to show whether engines will rob the sprinkler system?

What are the rules as to connecting engine lines to sprinkler siamese?

Stanford Ferguson, Chief, Fort Worth, Tex.: The systems are inspected monthly by regular fire prevention inspectors. We test and drain the systems when requested.

It is part of the schooling of the men that they have knowledge of wet and dry systems. About fifty per cent of the systems are supervised by the A.D.T.

John J. Gilday, Chief, Hoboken, N. J.: Installations are inspected monthly by department Captains.

J. C. Sullivan, Chief, Lowell, Mass.: We make periodic inspections. The systems are tested by representatives of the Underwriters. Department officers have knowledge regarding all systems installed.

George Alford, Chief, Pine Bluff, Ark.: Regular inspections are made every ninety days with an inspector from the Arkansas Fire Prevention Bureau. In case of fire, the system is placed back in operation at once.

We are thoroughly familiar with location of outside valves, control valves, and other equipment of the systems, both wet and dry.

J. F. Sullivan, Chief, Fall River, Mass.: The supervision that we maintain is that required by law—that the department shall be notified before any sprinkler system is shut off or any repairs made.

During periodic inspections by members of companies throughout their respective districts they become acquainted with the layouts.

Fred J. Washburn, Chief, Auburn, N. Y.: We have no supervision over sprinkler systems other than that in case of fire, and the supervisor of the system is absent, we replace sprinkler heads and reset dry valves (of dry systems) before leaving.

We inspect sprinklers in mercantile establishments but not in factories.

Company officers and all members are schooled in locations of outside connections, control valves and fire pumps.

Edward T. Rose, Chief, Wheeling, W. Va.: All but a few of the automatic sprinkler systems are hooked up to the nearest fire station with an automatic alarm which rings on a low pressure.

The sprinkler system alarm of each system is tested Wednesdays and Saturdays and a report sent to headquarters. If the test is not correct, the owner is notified to repair the alarm system.

Company officers and men make frequent inspection of all sprinkler systems. They know where all valves are located so that they can be operated at once.

N. J. Hinton, Chief, Ogden, Utah: We have very few sprinkler systems in our city. They are tested regularly by an Underwriters' representative.

Officers and firemen are familiar with all outside connections. We inspect the electrical system at regular intervals. We have a supply of heads to replace those that have fused.

Maurice Keating, Chief, Rochester, N. Y.: The fire prevention inspectors are instructed to report any defects found. We find that the larger buildings and department stores are ever ready to make connections to sprinklers and standpipes. Where there is an engineer on duty at all times, these men cooperate with us.

Michael W. Lawton, Chief, Middletown, Conn.: The department does not have supervision over automatic sprinkler systems. We have five systems connected to bells in headquarters and these are tested each day. Three are connected to another station. Other systems are inspected but are not tested.

The regular men are supposed to know the location of shut offs of all sprinkler systems.

Burr Hamilton, Chief, Marion, Ind.: In all plants where automatic sprinkler systems are maintained, we supervise them in the following manner: All outside valves bear a metal tag which gives the number of the shutoff valve. Above the valves and in a prominent place is a card showing just what the numbers on the tags mean.

Should there be a fire in a plant with a sprinkler system, and a sprinkler head is opened, we shut the main valve, drain the system, replace the fused head and put the system back in operation. Trucks carry a sufficient number of heads for this work.

We make no regular inspection and tests, but we assign an officer of the department to accompany insurance inspectors whenever requested.

We have only three electrically controlled systems. These are maintained and inspected by the electrician of each plant.

All company officers are familiar with all outside connections and valves. They become familiar with these through their monthly fire inspection of the various plants throughout the city.

Walter F. Israel, Chief, Detroit, Mich.: Sprinkler systems are inspected at regular intervals by inspectors of the Fire Prevention Bureau.

Gauges and valves are examined to see that they are in proper working order and that the heads are free from corrosion.

All commanding officers of companies are compelled to be thoroughly familiar with sprinkler systems and standpipes in their respective districts.

Edward F. Dahill, Chief, New Bedford, Mass.: Automatic sprinkler systems are inspected annually by District Chiefs, and the location of valves noted.

We have 180 sprinklered risks in the city. Twenty of these systems are connected to our fire alarm systems

through auxiliarized and master boxes. These are tested every month.

Under our laws no person shall shut off, disconnect, obstruct, or remove any automatic sprinkler system without a written permit from the Chief. This act was dratted and sponsored by the writer in order to maintain sprinkler protection in idle plants, and also to save adjoining property owners the expense of increased insurance rates.

John J. O'Boyle, Chief, St. Louis, Mo.: All officers in their respective districts inspect their various sprinkler systems, water curtains, valves, tanks, and pumps to become familiar with them. They do not conduct tests.

All the men know sprinkler and standpipe connections, and whether they are standard or have old threads. We carry adapters. Officers and senior privates know the location of outside street valves and so forth. These officers make reports once every two months.

H. C. Crumb, Chief, Bay City, Mich.: Sprinkler systems in our downtown district are inspected by our own men and by a representative from the National Board. Several factory sprinklers are tested at regular intervals by insurance company representatives.

Our company officers know the locations of all outside connections and control valves. We have no fire pumps installed on sprinklers in this city. If the water pressure is not enough, we connect a pumper to the outside connection.

S. T. Green, Chief, Gadsden, Ala.: We inspect but do not supervise sprinkler systems. The men know the location of all outside connections and where the valves are located.

E. C. Daunter, Chief, Jackson, Mich.: We have complete supervision over all sprinkler systems. We test and inspect them regularly. We expect that all of our officers know the location of all outside sprinkler connections, all shutoff valves, and all matters pertaining to the systems in our city.

Thomas J. Lynch, Chief, Waterbury, Conn.: We inspect sprinkler systems each month and test them twice each month. The men are acquainted with the location of valves and connections.

J. M. Slaughter, Chief, Paducah, Ky.: We have full control of sprinkler systems. We inspect them once each month and test once a week. Captains of all companies know the location of all outside valves and all inside shut-off valves. All systems are directly connected to the department.

J. J. Gillis, Chief, St. Cloud, Minn.: We have only three sprinkler systems in the city, and do not maintain any form of supervision. We inspect and test the systems. Company officers familiarize themselves with the operation.

L. B. Rapp, Chief, Lynchburg, Va.: We have a key to the building with which we can gain entrance to take care of the system. We do not inspect or test the system. It is done by representatives of the insurance interests. The men know the location of outside connections, control valves, etc.

William F. Welch, Chief, Lynn, Mass.: The department is notified when the system is shut off for any repairs, and the time that the plant is put back into operation.

Sprinkler systems connected with Fire Headquarters are inspected by the man in charge with representatives of insurance bureaus.

All company officers and members study the location of sprinkler valves and drips of all systems.

John C. Moran, Chief, Hartford, Conn.: We have regular inspections several times a month. We inspect but do not test the systems.

Every company carries cards on the apparatus which give data on all the sprinkler systems in their respective area.

Roland H. Weigand, Chief, Trenton, N. J.: My supervision is through the reports of inspections made by officers and men, who keep an index of their regular inspections and special reports regarding any defects.

Company officers, under department regulations, are compelled to familiarize themselves with all auxiliary fire connections and appliances, and they know their locations and needs.

Frank Charlesworth, Chief, Providence, R. I.: The automatic sprinkler systems in the more important buildings of this city are supervised by the A.D.T. and supervisory systems through t e Rhode Island Electric Protective Company. Such systems are inspected and tested by that company every thirty days. Our men know the location of all control valves and connections.

W. H. Joynes, Chief, Richmond, Va.: We do not have any supervision over sprinkler systems. We inspect, but we do not test them. All company officers of the district know the location of all valves.

William Frech, Chief, South Bend, Ind.: Inspections and tests are only made in company with the man who has charge of the sprinkler system.

B. L. Warlick, Chief, Jackson, Tenn.: The Inspection Bureau looks after the sprinkler installations. The men know the location of control valves and connections.

W. E. Twitty, Chief, Lubbock, Tex.: Sprinkler systems are regularly inspected by the insurance companies. They are testd by the owners usually at Saturday noon of each week. The Fire Department is only called in case of trouble.

All systems are controlled by inside and outside valves, and outside connections for Fire Department lines. Some are wired to the Fire Department for alarms and tests.

L. J. Urbanski, Chief, St. Joseph, Mo.: The Missouri Inspection Bureau inspects and tests sprinkler installations.

S. J. Flores, Chief, Shreveport, La.: The Fire Inspector supervises automatic sprinkler systems. The men are acquainted with the control devices of these systems.

Herman E. Gutheim, Chief, Cambridge, Mass.: Company officers are required to know the location of all outside connections, control valves, and how the system is supplied, of all systems in their respective districts.

Thomas F. Burns, Chief, Bridgeport, Conn.: The systems are supervised by engineers of plants, and tested and inspected by watchmen.

O. J. Parker, Chief, Atlanta, Ga.: Our Bureau of Fire Prevention has supervision of automatic sprinkler systems and we have had no trouble getting our recommendations carried out. We inspect sprinkler systems only by request. However, they are inspected each month by engineers of the Southeastern Underwriters. Each company officer has on each apparatus a complete map of his territory showing the location of outside sprinkler connections and various control valves. Company officers are required to make regular inspections of sprinkler risks and to keep familiar with the location of cut-off valves. A supply of sprinkler heads are carried on each apparatus and after each fire our department replaces the burst sprinkler heads and turns the water back on. The Underwriters are notified immediately and our sprinkler heads are returned. Where it is necessary, our department does not hesitate to connect a pump to the outside connection to furnish pressure for the sprinkler system.

* * *

ANSWERS TO PREVIOUS QUESTION

The following replies are in answer to a question on the testing of brakes on fire apparatus:

F. Gramley, Chief, Aurora, Ill.: Regular use of apparatus determines whether or not the brakes are in good condition, in addition to the frequent inspections by the mechanics. The Fire Department makes its own tests on apparatus. The tests are much more severe than are made of commercial trucks. Booster brakes are added to mechanical ones wherever necessary.

J. A. Roberts, Chief, Tucson, Ariz.: The judgment of the driver with regard to brakes governs whether or not they need replacing, repairs, etc. The tests on the brakes are made by the Fire Department. We make a more rigid test than is given commercial trucks.

W. L. Pitts, Chief, Selma, Ala.: No special tests on brakes are made by the state. The driver tests the brakes and keeps them in good condition.

Fireman Assists in Rescue

George Collins, a fireman of the Lowell, Mass., Fire Department, and Dr. Norman G. Long made a heroic effort to save the life of John McCoy, operator of a traveling crane, who became trapped when the machine was derailed and fell 20 feet, wedging him against an upright. It was necessary for the doctor, working from the top of a fire department ladder, to amputate McCoy's right arm. At the hospital John W. Gray, driver for Chief James C. Sullivan, of the Lowell Fire Department, donated blood for a transfusion. McCoy lived for six days in St. Joseph's Hospital, but finally succumbed on February 25. HARRY BELKNAP.

Salem, Mass., voted to spend $9,000 for a new pumper.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Placing Ladders, etc.

To the Editor:

Will you kindly answer the following questions?

1. In raising a truss ladder 32 feet and 35 feet, which side faces the building, the beam side or the truss side?

2. In sending up 2½-inch hose to upper stories and roof and also to lower same, where should the knots be tied for empty lines and loaded lines? We do not move loaded lines at fires as yet, but if the time comes we will be prepared.

3. In hooking up engines in relay from No. 1 pump to No. 2 pump what is the layout?

4. What is a hook up for a blocked plug? W. W.

Answer 1: In raising a trussed ladder, the trussed or curved side of the ladder is usually placed toward the building. Some manufacturers build the ladders with projecting bolts on the curved, or trussed side, indicating that this side is not intended for climbing, for the projected bolts would seriously interfere with the operations of the men. Some ladders are built with both sides identical, both curved, and in this case, either side might be climbed.

Answer 2: When hoisting hose to upper floors, the rope is lowered from the roof or from the window to which the hose is to be raised, to the yard. A man on the ground puts two half hitches and a binding knot on the hose about four feet from the butt. After the hose is hoisted and placed in position, it is made secure by fastening it with a roof rope to some secure point, such as the chimney, etc. In this case, a rolling hitch (four rolls and a half hitch) and a binding knot just under the butt are used.

For hoisting full lines of hose, approximately the same procedure would be followed, although raising charged lines is not considered good practice.

Answer 3: The hook-up depends upon the quantity of water to be discharged. If the quantity is not excessive, a single line between the first and second engines will be satisfactory. On the other hand, if capacity is required from the two engines in relay, then two lines between the first and second engines would be necessary. In referring to relay in this problem, it is assumed that the engines are placed close together. If they are placed far apart, the problem is entirely different, and in this case it is likely that single lines between the engines would be used entirely.

Where engines are placed close together in tandem the actual connections between the lines from the first engine and the intake of the second engine, depend entirely on the second engine. If a single line is stretched, it is attached to one of the discharge ports of the first engine, and the other end connected to the intake of the second pumper by the use of the proper fitting (i.e., double female increaser, etc.).

If two lines are to be employed between the two engines, a siamese connection attached to a double female increaser would be required at the second engine.

Answer 4: It is not clearly understood what is meant by "blocked plug." In the first place the plug should not be blocked by traffic if parking laws are enforced. However, assume that a car obstructs the plug and it cannot be readily removed by the Fire Department, then about the only thing you could do would be to use soft suction in making a connection from the hydrant to the engine.

Should the plug be blocked against use by burred threads on the hydrant nipple, a universal coupling can be applied to make connection to the hose line.

Fire in Wood-Worker

To the Editor:

You are in command of a first alarm at a fire in a two story frame wood working establishment. The adjoining buildings are of fireproof construction and the nearest is 200 feet distant. The automatic sprinklers with which the building on fire is equipped are in part shut off for repairs, piling of stock is blocking the fire doors intended to protect communicating floor areas. The roof is of frame construction with several large skylights. Due to lack of orders there is but moderate amount of raw stock, but there is a large amount of finished material on both floors. Interior vertical openings are unprotected; power and light are by electricity; heat by steam from an adequate heater in a cut off in rear. Building faces a 40-foot street, dead-ending just beyond the fire. One hydrant is located at dead-end of the street and another is 600 feet away at the nearest street intersection. Water supply from 6-inch main, normal pressure 60 pounds. The fire originated in the rear of the first floor under a stairway and is rapidly involving the upper floors on your arrival.

A. In attacking a fire of this nature what conditions could logically be expected to develop. B. What fire fighting equipment would be required. C. How would you proceed.

W. J. C.

Answer: The area of the building is not given and this has a very material bearing upon the apparatus which would be required to combat the fire therein.

Furthermore, no mention is made of sprinklers inside the building and whether there is a sprinkler tank filled with water at the time of the fire which could be called upon for use by the Fire Department.

With the above limitations your three questions will be answered in order asked.

Answer A: Conditions which would be likely to develop would include spread of fire over the top floor, and over a large part of the floor below. Failure of sprinklers to operate would permit the fire to spread unchecked, as would also the unprotected openings (vertical) and open fire doors.

Only one hydrant is immediately available and this is the hydrant located at the end of the dead end street. There will be possible danger of this hydrant being put out of service in the event that the walls of the building will fall or the fire might get so hot to make the position of the men untenable. However, this point is not covered in the question and it will be assumed that this hydrant will be available for use during the course of the fire.

The next nearest hydrant is six hundred feet away, and assuming that it is attached to the same six-inch main supplying the hydrant at the dead end street, it will be of questionable use.

As the six-inch main can only be called upon to supply four good fire streams, and as all these streams can be taken from the one hydrant, it is not likely that the hydrant 600 feet away will be of much help.

Answer B: As to fire fighting equipment required, two pumpers will be needed with additional pumpers for location at more remote hydrants. If the building exceeds 50 x 100 feet area, a third alarm should be transmitted to bring out sufficient personnel and pumpers.

Short ladders will be required, and it is likely that one city service truck responding with the first alarm can take care of laddering the building.

Answer C: Assuming that you are first to arrive, in command of fire alarm assignment, immediately send second

and third alarms. Place the first two engines at the hydrant at the dead-ended street and stretch four lines at once to the building. One line should be stretched to the ground floor to prevent extension of fire on this floor and the other three lines to the second floor of the fire building. So place the lines so as to head off the fire.

Members of first truck company go to the roof at once and open up over the section of the second floor involved, to keep the fire from spreading over the entire floor. As additional engines arrive on the second and third alarms, they should be placed at nearest available hydrants, not connected to the six-inch dead end main, and lines should be stretched in.

If the standpipe feeding the sprinkler tank is available for use it may be possible to attach one engine to this standpipe, although this may be a dangerous procedure, especially if the fire is spreading fast and threatens to involve the entire building.

NEW YORK STATE FIRE CHIEFS HOLD MID-WINTER MEETING AT MT. VERNON

Training of Volunteers, Good Versus Bad Legislation, Compensation of Volunteers in Service and Other Topics Discussed

THE mid-winter meeting of the New York State Association of Fire Chiefs was held at the City Hall, Mount Vernon, N. Y., at 10 a.m., on Wednesday, March 11, with about 45 Chiefs present from all parts of the state. The meeting was opened by Chief Edward W. Gieselman, Syracuse, Second Vice-President of the association, in the absence of Chief Fleming, Albany, President. The members were welcomed by Mayor Denton Pearsall, Fire Commissioner William Hallihan and Chief John Gibson, of Mount Vernon.

A letter was read from Chief McElligott, of New York, regretting his enforced absence and thanking the association for the work done in helping the passage of the act of the New York Legislature giving back to the New York Fire Department authority over the Division of Public Assembly and the Bureau of Combustibles. Chief Chambers, Yonkers, also spoke on this subject.

Advisory Committee on Fire Training

The Chair then called on Albert H. Hall, Assistant Secretary of the Mayors' Conference, who outlined plans of the association's Advisory Committee on Fire Training. He said that it was hoped to hold a school for fire zone instructors. A meeting is to be held soon to formulate plans. The zone instructors will be enabled to use the Albany fire tower and will be quartered with the Albany Fire Department, so that the expenses incident to the school will be slight.

Mr. Hall said that copies of the Lectures on Evolutions furnished by the association had been requested from all parts of the United States and Canada, besides England and other foreign countries. It is hoped to revise and publish a new set of lectures on evolutions. It had been proposed to enact a law providing for a compulsory system of zone training. The state Civil Service Commission was in favor of the plan, but a difficulty was that there is no board so constituted that it could take charge of such a system.

A Dangerous Piece of Legislation

Mr. Hall called attention to a bill before the Legislature to limit taxation of real estate to 1½ per cent of the assessed valuation of the municipality. He pointed out that this bill, if it became law, would greatly reduce the appropriation possible for fire and police protection, would mean the limitation of all Fire Departments, dismissal of men, reduction of improvements and elimination of proper fire protection. He said that no sane bond house would handle city bonds under such a system and that all municipal advancement would be stopped.

President Fleming, Mr. Hall announced, is to send a letter to every Chief in the state asking that he communicate at once with his local Senator and Assemblyman, asking him to vote against this legislation.

It was moved and carried that the association go on record as opposed to this bill.

Discussion on Volunteer Chiefs

Chief John J. Brennan, Pelham Manor, suggested that a topic for the next annual convention at Kingston be "The Volunteer Chief." There was considerable discussion on this subject. Chief Chambers thought that often the subject of papers were apt to be over the heads of many of the Chiefs. Chief Gates, Glenns Falls, believed that paid Chiefs should rub shoulders with those from volunteer departments. He thought that it would be better for volunteer Chiefs to serve at least two or three years at the head of the department, rather than only one year.

Chief Drake, Secretary of the Mid-Hudson-Harlem Valley Fire Chiefs Association, spoke of the advantages of meetings and conventions to the small town Chief. It was finally moved that the subject of "The Volunteer Chief" be incorporated in the program of the next convention. Carried.

The morning session then adjourned for luncheon at the Mount Vernon Turn-Verein, by courtesy of the Mount Vernon Fire Department.

Study in Evolutions

At the opening of the afternoon session at the City Hall, a rising vote of thanks was tendered to the Mayor, Fire Commissioner and Chief Gibson for the excellent luncheon provided.

Secretary Chris Noll read a series of evolutions formulated by the Syracuse Fire Department. Chief Grabb, New Rochelle, was welcomed by the Chair and congratulated on his complete recovery from his recent illness.

Bill to Appoint Fire Commissioners Opposed

Judge Hoop, Bronxville, read a bill before the legislature, providing for the appointment of the members of the Eastchester Township Board of Fire Commissioners, which are now elected. He pointed out that the association should oppose the passage of this bill, as if one such law should be enacted, others of similar import would follow. The Legislative Committee was instructed to oppose the bill.

Chief Chambers called attention to a bill which provides that municipalities are to be made responsible for accidents happening to drivers of fire apparatus, when in performance of their duty. Judge Hoop read the bill and it was endorsed by the association.

Compensation of Volunteers for Services

There was further discussion of compulsory education of volunteers. The plan was opposed by Chief Drake, who also believed that the volunteer firemen should be given some inducement to attend drills and fires. Chief Brennan opposed the idea of compulsory education of volunteers. He did not see why volunteers should not be compensated for work performed. In his village of 5,000 people a firemen's fund of $3,200 had been raised the first year it was proposed and continued each year. This had enabled the compensation of the men for every fire and drill attended. The plan had been a great success. Deputy Chief Eggleston suggested a state fund set aside for the entertainment of volunteer firemen. Others discussed the subject.

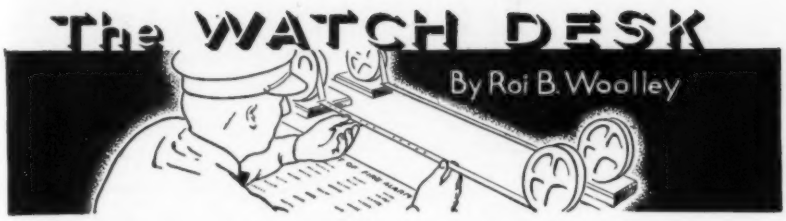
The I. A. F. C. Directors' Meeting

Former Chief Mulcahey, Secretary-Treasurer of the International Association of Fire Chiefs, gave an account of the recent meeting of the Board of Directors of the association, and the work accomplished by that body.

Court Voids Nebraska Pension Law

The court has held unconstitutional the fire department pension law of Nebraska. The law levied a tax of two per cent on gross fire premiums, less reinsurance paid authorized companies, on policies covering property within the corporate limits of cities and villages. The case decided was the case of the Continental Insurance Company vs. Director of Insurance.

Fire Commissioner Earl Krows, Hastings-on-Hudson, N. Y., President of the Fire Chiefs Emergency Plan, has announced the engagement of his daughter, Isabel, to Joseph G. Riddle, Jr., son of Captain Joseph G. Riddle, New York Fire Department.



Our inquiring reporter overhauls the firemanic news of the day.

Month's "Tall Story"

A great black cloud appeared suddenly over Malibu Hills, near Santa Monica (Cal.) hovering like a smoke pall over the land. Assistant County Fire Warden Al Weinert saw it from his lookout tower, flashed an alarm. Fire crews rushed to scene—to find billions of flying ants swarming—of all places—over "Sugar Loaf Peak."

Burns Himself to Death

Thomas Buttner, aged 24, Woodside (L. I., N. Y.), had financial troubles. Soaked his clothing in gasoline and applied match. Neighbors saw him in yard, enveloped in flames, beat out fire with blankets. He died. Well, sad it is, he might have done the job in the house—and destroyed it with him.

Oh, For the Life of a Fireman!

Smoky fire in sub-cellar of building in New York drove 40 persons to street including six females who were undergoing beauty treatments on second floor. Firemen startled to see wild looking women with waving irons still in their hair and faces looking like they'd been badly scorched, running wildly about the street. The "scorch" proved to be mud baths and firemen breathed easier.

The Cat's Meow

Captain Wm. Paul Babcock, Nyack (N. Y.), sends this: Cats haven't been popular with the Nyack F.D. and orders were issued for F.D. not to risk life and limb "rescuing" pussies out of trees. Instead firemen were left to organize volunteer rescue parties on their own.

Such a party braved zero Feb. blasts to rescue freezing kitty from cold perch in cold tree. Cat, apparently doomed by its own descendo-phobia to spend second night in tree mewed pitifully but disdained all efforts of neighborhood to induce him, her or it, to "c'm down and go home." Lieutenant J. Crowley and fireman R. Frae, Nyack Fire Patrol, volunteered to rescue animal, which they did with help of ladders, rope, gloves and free advice of shivering onlookers. Their reward—scratches and frostbites.

Cold Weather and Gas Don't Agree

Winter's sustained cold snaps played havoc with illuminating gas systems—and caused firemen plenty of trouble—in many cities. Papers reported gas main leaks caused 16 deaths in one week in Chicago (Ill.) due to escaping gas. Persons were killed by explosion, by fire and by asphyxiation. This form of danger, charged to persistence of extreme cold this winter appeared in spectacular fashion in Utica (N. Y.), and many other places.

Residents of East St. Louis and Belleville (Ill.) faced danger from odorless, invisible illuminating gas, seeping into homes along sewer mains which killed four and left 64 others ill. A family of four in Sycamore (Ill.) was asphyxiated by gas from leaking main 20 feet outside house. In Toledo (O.) inhalator squads were kept busy resuscitating persons overcome from small but strange fire in a business block, while explosion and fire destroyed a residence, killing one and injuring others. During one week in Feb. eight died in Michigan (four being killed in gas explosion which wrecked two River Rouge homes; two being killed in Detroit, and two in Clio)

Gas leaks, laid to frost heaves due to weather, caused a blast in Worcester (Mass.). In New York City manhole covers went skyward at W. Broadway and Worth Street, following a fire which burned insulation on feeder cables. One workman burned. Firemen fought blaze two hours, using chemicals. New York City's fatalities from gas asphyxiation, explosions and fires said to be heavier than for any corresponding period in city's history.

Will They Ever Learn?

Just a few random clippings from only a small section of the country showing that fire and clothing do not mix:

*

Her nightgown ignited by kitchen range, Mrs. Felicina Nardini, aged 88, suffered fatal burns in her home on Staten Island (N. Y.) and started fire that burned out room.

*

A black neck ribbon, part of uniform of St. Gabriël's Parochial School (N. Y. C.), caught fire, while Anna Gavin, aged 9, bent over gas range. She was taken to hospital in serious condition; rescuer, Gerald Jones, suffered burns requiring medical attention.

*

Israel Horowitz, aged 65, totally blind, habitually smoked in bed, in his apartment (Brooklyn, N. Y.). Ultimately fell asleep with lighted cigarette. Bedding caught fire, he was critically injured.

*

Her evening dress ignited by a cigarette or the tip of a match, Mrs. A. G. Buchsbaum, aged 22, became a human torch in lobby of Music Box Theatre (N. Y. C.). Before flames in her highly inflammable gown could be extinguished she was badly burned on body and legs. Lobby became milling mass of excited men, hysterical women. Panic narrowly averted.

*

An invalid of 89, Charles Dorrance smoked in bedroom of three-story nursing home (Chicago, Ill.). Result he was burned to death and fire destroyed home, injuring two rescuers, who saved other patients.

*

Sparks from cigarette he was smoking while listening to a radio started fire, bringing death to smoker, Theodore Wright, WPA supervising engineer (Stamford, Conn.). Loss on home $2,500. Mrs. Wright rescued by 17 year old boy neighbor.

*

Harry Ashmann, aged 55, a waiter (N. Y. C.), attempted to light coal stove. Set fire to himself instead; seriously burned, on head and hands.

*

Mrs. Rose Marino, aged 70, was cleaning coal range when her clothing caught fire. Died before neighbors could rescue her.

*

James Pierre (N. Y. C.), aged 21, died three hours after he was transformed into flaming torch, when can of lacquer exploded in kitchen of his home.

Time Marches On—So Does Fire!

January held up the mortality records, topping the tragedies with 15 lives lost in a wooden hotel fire in Lakewood (N. J.) and 9 fatalities resulting from fire and panic in Chinese restaurant (N. Y. C.). . . . Latter fire was blessing in disguise for N.Y.F.D., as it helped restore Bureau of Combustibles back to F.D. control. Bureau had formerly been transferred from F.D. to Building Department over protests of Commissioner-Chief J. J. McElligott and scores of other officials. . . . Fire in room of century-old Lafayette House, Jersey City (N. J.), burned two fatally, injured rescuers. . . . Another hotel fire in Warren (O.) killed three, injured five, loss $150,000, cause "undetermined." . . . Trapped in farm home near Midland (Mich.) two young girls and 22-year old brother were killed duplicating tragedy of 18 years ago, when three other children of same family died from a fire which destroyed their home. . . . An apartment house fire in Soho district of London (Eng.) killed four persons.

WHAT DO YOU KNOW?

The Editor of "The Watch Desk" welcomes contributions from readers of FIRE ENGINEERING that briefly give facts about interesting, odd things that have to do with fires, fire-fighting, etc. Address "Editor, Watch Desk."

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of March, 1936. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending March 31	Loss in Thousands of Dollars
Warren, Ohio—Hotel Warren destroyed	$125
Lebanon, Tenn.—Lebanon High School destroyed	85
Estevan, Sask.—Carnduff Hotel, Estevan Hospital and adj. property	55
Indianapolis, Ind.—Property on North Illinois Street	80
Freedom, Wyo.—Cheese factory on Wyoming-Indiana boundary	50
Providence, R. I.—Business property at Union and Weybosset Streets	90
Toledo, Ohio—Bldg. at 1102-8 Summit St. destroyed	70
Fannin, Miss.—Know Glass & Bottle Co. plant damaged	50
Bel Air, Md.—Bel Air Presbyterian Church destroyed	70
Danbury, Conn.—Yameen Fur Company bldg. destroyed	50
Creston, Wash.—Creston Co-operative Grain Co. elevator destroyed	50
Washington, D.C.—Lumber yard of Galliher & Klimikiewicz	170
Huntsville, Ala.—Huntsville warehouse company	50
Welch, W. Va.—Apartment property owned by Sam Polan	80
Skaneateles, N. Y.—Brounstein clothing store and adj. property	50
Elcho, Wis.—Elcho Corporation damaged	80
Westport, N. Y.—Post office bldg. and adj. property	70
Newport, R. I.—Boston department store damaged	50
St. Catharines, Ont.—Canadian department store, on St. Paul St.	125
Vancouver, B. C.—Plant of Canadian Roof Products, Ltd.	80
Portsmouth, N. H.—Frankling shiphouse at Portsmouth Navy Yard	125
Rockford, Ill.—Peterson Tavern and adj. factory building	50
Idaho Falls, Idaho—Rogers building damaged	80
New Milford, Conn.—Administration bldg. of Canterbury School	80
Muskegon, Mich.—Occidental hotel block	325
Youngstown, Ohio—Plant of Cold Metal Process Co., destroyed	400
Anderson, S. C.—State whse. operated by A. M. Klugh & Co.	80
St. John, N. B.—Plant of Canada Veneers, Ltd., at Coldbrook Park	125
Henry, Ill.—Building occupied by Famous Clothing Co.	50
Toronto, Ont.—Soap factory of G. H. Wood & Co., damaged	70
Texarkana, Tex.—Business property in Sandflat district	5
Los Angeles, Cal.—Whse. at Aliso and Myers Streets destroyed	80
West Warren, Mass.—Plant of Ohio Carpet Co., and adj. dwellings	80
Newton, Kan.—Burrton grade school destroyed	50
Menasha, Wis.—Menasha high school bldg. destroyed	250
Fort Worth, Tex.—Whse. of Collings-Burford Wholesale Liquor Co.	100
Gila Bend, Ariz.—Lumber yard and adj. business property	200
Houston, Tex.—The Grove, a night club, 12 mi. out	170
Ventnor, N. J.—Ventnor Theatre destroyed	100
Gainesville, Tex.—Junior high school bldg. destroyed	50
Delavan, Wis.—Dining hall of State School for the Deaf	70

Five Firemen Killed by Wall Crash

Five firemen of Columbus, Ohio, were killed, and seven others were seriously injured when a wall crashed as the department was fighting a fire in the I.O.O.F. Building during sub-zero weather.

The fire was discovered by a barber in the building, who detected the odor of smoke. The first alarm was turned in at 12:43 a.m., the second at 12:49 and the third at 1 a.m. Two calls for additional men and equipment were made at 1:21 and 1:53 a.m.

All high tension and trolley wires were cut when they became heavily coated with ice and they were in danger of snapping.

The men killed and injured were on a fire escape on a rear wall of the building, when without any warning, the wall collapsed, carrying the men to an areaway. It was necessary to cut away steel structural members to remove the trapped and dead. Ice cakes five feet thick formed on the sidewalk as the water cascaded from the building.

Due to the shortage of police and firemen, members of the street cleaning department and city prison trusties were mustered to clean up the debris.

No one knows just how the fire started, although Chief Welch believes that it may have been caused by defective wiring.

Chief John C. Moran 50 Years in Department

John C. Moran, Chief of Fire Department, Hartford, Conn., for twenty-three years, celebrated his fiftieth anniversary in the fire service.

When he first joined the department, drills were unheard of things. One acquired the information and training as one went along. When he was appointed

Chief John C. Moran

Second Deputy Chief on October 12, 1908, he was detailed to attend the New York Fire College. When Chief Moran returned, a local training school was established by the Board of Fire Commissioners.

He was promoted to First Deputy Chief on March 9, 1912, and Chief on November 1, 1913.

Searching Through the Debris for Victims of the Fire that Claimed Five Lives at Columbus, Ohio

TOPEKA DEPARTMENT GETS FIRST CLOSED BODY RURAL TRUCK

Probable That Next Two Triple Combination Pumpers Purchased Will Also Be Closed Jobs

By William J. Cawker
Fire Marshal and Building Inspector, Topeka, Kan.

A FEW years ago the state of Kansas adopted a legislative act which permits cities of this state to enter into contracts to furnish fire protection service to townships, individuals, groups of individuals, firms and corporations whose property is situated outside the city limits. At the present time the city of Topeka has in effect contracts to furnish fire protection to two adjoining townships with an approximate combined area of 110 square miles. In addition to these two township contracts, there are several contracts with individuals and institutions outside the corporate limits but not within the two before mentioned townships.

Personally, I have strenuously opposed the out-of-town contracts, contending that the city taxpayer should be given the full amount of fire protection for which he is taxed, and, further, that it is unreasonable and foolhardy to send a piece of heavy duty fire apparatus with 1,200 feet of 2½-inch hose out of reach of water supply, at the same time weakening an undermanned and under-equipped service.

The standard pumpers are equipped with 100-gallon or less booster tanks and such a small amount of water does not have much effect on the average country fire occurring several miles out. The rural resident, like his urban brother, does not give much thought to the possibility of fire upon his premises. Consequently, it is unusual to find water enough to replenish the booster tanks, and under such circumstances all that can be done is to prevent the spread of fire to adjacent structures.

In spite of these objections the officials felt that there should be a reciprocal service in order to maintain trade relations. They entered into these contracts with that thought in mind. Shortly after the first township contract was in effect, firemen were compelled to respond to alarms in severe winter weather. As some of the further points of the townships are all of ten miles beyond the city limits, the men were subjected to severe exposure. We realized it was necessary to give those men some degree of bodily protection from the elements.

It was not uncommon for company officers to report that upon these outside calls, by the time the men arrived at the scene of the fire they were in no fit physical condition to carry on fire-fighting operations. The result of these experiences was the planning of the enclosed type of fire truck now in use by this department. The department considers this a very practical and efficient piece of fire-fighting equipment.

A three-ton commercial chassis was purchased, upon which was mounted a closed body. This body is equipped with a 525-gallon water tank, hose compartments sufficient to carry 400 feet of ¾-inch fire department chemical hose, 600 feet of cotton, double jacket, rubber lined 1½-inch hose, and in addition, 100 feet of 2½-inch hose; one 2½-gallon soda-acid extinguisher, one 2½-gallon hand water pump with ten feet of hose, two axes, one pike pole, one 28-foot extension ladder, one 14-foot roof ladder, three 10-foot lengths of 3½-inch hard suction, and other miscellaneous equipment.

The hose compartments are so arranged that the hose is divided in a manner that four lines can be used simultaneously. The two ¾-inch lines are permanently connected to the pump; the 1½-inch lines may be connected to the pump outlets as needed. You will note that the body has two forward openings, one on each side, through which the ¾-inch lines can be taken from either side of the body.

Two auxiliary seats are provided inside of the body near the rear windows. These seats fold into recesses in the body when not in use. The pump is a Barton front end pump with a capacity of 400 gallons. The suction intake is provided with a 2½-inch click value connection so that a 2½-inch line can be used for suction where city hydrants are available. We find that this arrangement gives an adequate amount of water to supply all four lines at one time.

Weather conditions have been unusually severe in this locality the past winter and the enclosed piece of equipment has demonstrated its value in protecting the men while responding to alarms, as well as giving them ample protection on the return to quarters when they are more or less wet and cold from their fire-fighting activities. The department likes the idea of the fully enclosed fire truck so well that we are seriously considering the adoption of the all-enclosed type for all future purchases of this department. We are considering the purchase of two 750-gallon standard pumpers fully en-

Rear of Apparatus Showing Arrangement of Interior

Space has been provided for carrying 400 feet of chemical hose, 600 feet of rubber lined 1½-inch hose, and 100 feet of standard 2½-inch hose. It has space for portable extinguishers, and the usual tools such as axes. There is also a 525-gallon water tank inside.

Special Enclosed Apparatus for Answering Out-of-City Calls

closed in a manner similar to this first piece of enclosed equipment.

The rear door is an overhead door of flexible four-panel construction, operating on rollers traveling in steel channels and counter-balanced by coil springs. When the door is open it gives full clearance of the entire rear end of the body and is held in open position by automatic catches. When the door is closed it can be opened from either the inside or outside.

EASTERN CHIEFS COMPLETE PLANS FOR ANNUAL CONVENTION TRIP

Expect to Have Special Train From New York for Toronto Meeting, Which Is To Be Held On July 28-31.

BECAUSE of the early interest shown in the annual convention of the International Association of Fire Chiefs, to be held at the Hotel Royal York, Toronto, Ontario, on July 28-31, it has been necessary to lay out tentative plans for trips to and from the meeting. The Chiefs in the Eastern section of the country, in cooperation with representatives of the Lehigh Valley Railroad Company, have already completed details for a specially conducted tour to Toronto, with or without a side trip on the return part of the journey.

The itinerary follows:

Itinerary, Eastern Division, International Association of Fire Chiefs to Annual Convention, Toronto, Ont., July, 1936

Eastern Standard Time (Daylight Saving Time One Hour Later).

Trip "A"—Going and Returning Direct

Monday, July 27

Lv. New York (Pennsylvania Station)—7.15 a.m.—Lehigh Valley R. R. (8.15 a.m.—Daylight Saving Time).

Lv. Newark (Pennsylvania Station)—7.32 a.m.—Lehigh Valley R. R. (8.32 a.m.—Daylight Saving Time).

Lv. South Plainfield—7.59 a.m.—Lehigh Valley R. R. (8.59 a.m.—Daylight Saving Time).

Lv. Philadelphia (Reading Terminal)—7.30 a.m.—Reading Company (8.30 a.m.—Daylight Saving Time).

Parlor car seats to Toronto. Luncheon and dinner in dining car. A daylight ride over the Lehigh Valley's scenic route. The rolling New Jersey farmlands, Mauch Chunk, "Switzerland of America," the Wyoming Valley viewed from the heights of the Wilkes-Barre Mountain, a hundred miles along the Susquehanna River so rich in history and legend, the Finger Lakes Region—are just a few of the scenic treats which this trip unfolds mile after mile.

Ar. Toronto 8.20 p.m.—Canadian National Railway.

Transfer to Royal York Hotel. Rooms with twin beds and bath assigned.

Tuesday, July 28; Wednesday, July 29; Thursday, July 30; and Friday, July 31
Attending Convention.

Return Trip "A"

(For those who desire to return home immediately after the Convention.)

Friday, July 31

Transfer from Royal York Hotel.

Lv. Toronto 7.15 p.m.—Canadian National Railway.

Sleeping car to Newark and New York.

Saturday, August 1

Breakfast in dining car.

Ar. Philadelphia (Reading Terminal—7.45 a.m.—Reading Company.

Ar. South Plainfield—7.24 a.m.—Lehigh Valley R. R.

Ar. Newark (Pennsylvania Station)—7.56 a.m.—Lehigh Valley R. R.

Ar. New York (Pennsylvania Station)—8.15 a.m.—Lehigh Valley R. R.

Cost Per Person

The cost of trip from New York, Newark and Philadelphia, including round trip transportation, parlor car seat to Toronto, lower berth on return trip, transfers as specified, rooms with twin beds and bath at Royal York Hotel and all meals except while in Toronto attending the Convention, also tips for the trip will be:

From:

New York or Newark	$56.60
Philadelphia	$57.60

Direct Trip "A"

Rates from the following points including transportation and Pullman service to New York and return (no meals) and all features as outlined in itinerary from New York are:

From:

New Haven, Conn.	$61.60
Hartford, Conn.	$63.80
Boston, Mass.	$72.90

Rates from the following points including transportation and Pullman service (lower berth) to Philadelphia and return (no meals) and all features as outlined from Philadelphia are:

From:

Washington, D. C.	$65.60
Atlanta, Ga.	$89.45
Birmingham, Ala.	$91.45

Trip "B"—Vacation Trip

Monday, July 27

Lv. New York (Pennsylvania Station)—7.15 a.m.—Lehigh Valley R. R. (8.15 a.m.—Daylight Saving Time).

Lv. Newark (Pennsylvania Station)—7.32 a.m.—Lehigh Valley R. R. (8.32 a.m.—Daylight Saving Time).

Lv. South Plainfield—7.59 a.m.—Lehigh Valley R. R. (8.59 a.m.—Daylight Saving Time).

Lv. Philadelphia (Reading Terminal) 7.30 a.m.—Reading Company (8.30 a.m.—Daylight Saving Time).

Parlor car seat to Toronto. Luncheon and dinner in dining car. Daylight ride on scenic Lehigh Valley Route.

Av. Toronto 8.20 p.m.—Canadian National Railway.

Transfer to Royal York Hotel. Rooms with twin beds and bath assigned.

Tuesday, July 28; Wednesday, July 29; Thursday, July 30; and Friday, July 31
Attending Convention.

Friday, July 31

Transfer to Canada S. S. Line Dock.

Lv. Toronto 3.00 p.m.—Canada S. S. Line.

All meals and berth in outside stateroom on steamer.

Saturday, August 1

During the morning steamer passes through the famous Thousand Islands district. Arriving at Prescott at 11.00 a.m., change is made to rapids steamer. The rapids are in a series with quiet stretches between, all the way from Prescott to Montreal and their passage constitutes one of the most thrilling but, withal, safe experiences one can have. The Long Sault, one of the longest, extends for nine miles through channels between wooded islands.

Ar. Montreal 6:00 p.m.—Canada S.S. Line.

Lv. Montreal 6.30 p.m.—Canada S. S. Line.

All meals and berth in outside stateroom on steamer.

Sunday, August 2

Ar. Quebec 6.00 a.m.—Canada S. S. Line.

For those desiring to attend Church services, early breakfast will be served. Church is located a short distance from the dock and provisions will be made for entire party to leave after church for sightseeing trip around this most interesting city.

Lv. Quebec 8.30 a.m.—Canada S. S. Line.

On the St. Lawrence River, making stops at Murray Bay, Canada's most exclusive summer colony; St. Simon and Tadousac, a little French village located just where the Saguenay River flows into the St. Lawrence. The Saguenay River, sombre, silent and mysterious, provides a fitting climax to the day. Nowhere are finer sunsets seen than as the steamer sails up the Saguenay in the late afternoon and early evening. The steamer is moored for the night at St. Alphonse or Bagotville. All meals and berth in outside stateroom on steamer.

Monday, August 3

In the morning, after leaving Bagotville on the downward trip, settlement ceases, then, as the panorama gradually unfolds itself, the great river continues to grow more solemn and awe-inspiring, until the climax is reached at Capes Trinity and Eternity. It is a tremendously thrilling and never-to-be-forgotten trip and will be voted the "high light" of the entire tour.

Ar. Quebec 6.30 p.m.—Canada S. S. Line.

Lv. Quebec 7.30 p.m.—Canada S. S. Line.

All meals and berth in outside stateroom on steamer.

Tuesday, August 4

Breakfast on steamer.

Ar. Montreal 7.00 a.m.—Canada S.S. Line.

In forenoon we will make trip around Montreal, taking in both the ancient and modern sections, encircling Mount Royal at Notre Dame Church, St. Joseph's Shrine and Westmount Lookout, terminating at Mount Royal Hotel where we will have luncheon and dinner.

Lv. Montreal 8.45 p.m.—Canadian National Railway.

Sleeping cars to New York.

Wednesday, August 5

Breakfast in dining car.

Ar. New York (Pennsylvania Station)—7.50 a.m.—Pennsylvania Railroad.

Ar. Newark (Pennsylvania Station)—8.27 a.m.—Pennsylvania Railroad.

Ar. Philadelphia (Pennsylvania Station)—9.58 a.m.—Pennsylvania Railroad.

COST—Per Person

The cost of this trip including round trip transportation, parlor car seat to Toronto, rooms with twin beds and bath at Royal York Hotel, and all meals except while in Toronto attending convention, berth in outside staterooms Toronto to Saguenay River and Montreal, lower berth Montreal to New York and/or Philadelphia. Also tips for the entire trip, and sightseeing trips and transfers as specified will be:

New York or Newark	$108.60
Philadelphia	$112.25

Trip "B"—Saguenay River Vacation Trip

Rates from the following points including transportation and Pullman service to New York City and lower berth from Montreal to starting point and all features as outlined in itinerary from New York are as follows:

From:

New Haven, Conn.	$110.40
Hartford, Conn.	$110.40
Boston, Mass.	$116.40

Rates from the following points including transportation and lower berth to Philadelphia and return (no meals) and all features as outlined from Philadelphia and return are:

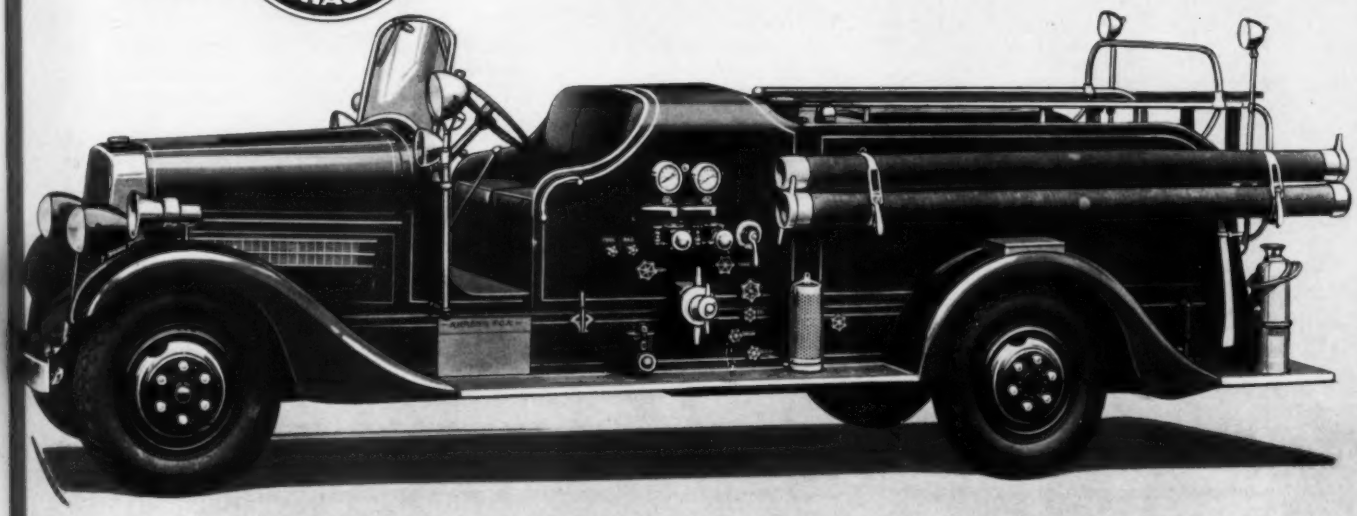
From:

Washington, D. C.	$123.50
Atlanta, Ga.	$151.35
Birmingham, Ala.	$152.80

Lieut. Arthur E. Espey, Elmira, N. Y., has been selected to conduct a firemen's training course at Athens, Pa., to continue until July.

Announcing

THE UNION OF TWO GREAT COMPANIES!



A Look At The Past Foretells A Brilliant Future...

In the same spirit of progress in which each was founded, two great institutions — The Ahrens-Fox Fire Engine Company and The LeBlond-Schacht Truck Company—combine to render even greater service to those who use their products!

One hundred and six years of combined experience, plus broadened manufacturing facilities, a strong financial background, and a stronger personnel than ever as the executive personnel of both companies—including Mr. Fox and Mr. Ahrens, nationally known in the industry—will continue.

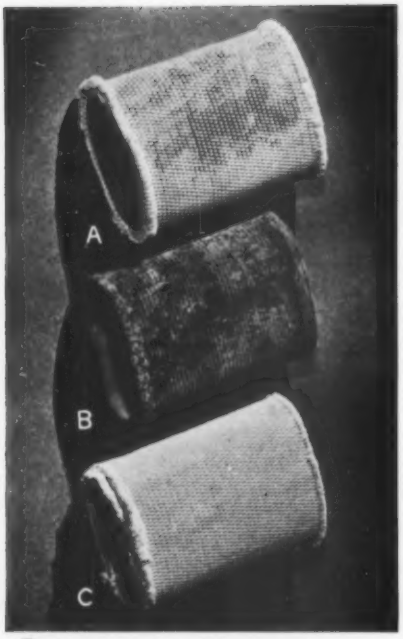
The management pledges itself to a continuation of the unparalleled Ahrens-Fox service and through this merger of the ability and experience of both organizations a constant development of the present highly efficient Ahrens-Fox fire fighting equipment.

Any community which needs fire fighting equipment—standardized or special—will find that Ahrens-Fox satisfies every requirement!

THE AHRENS-FOX FIRE ENGINE COMPANY

CINCINNATI, OHIO

• *Modern streamlined equipment for this modern day of fire fighting . . .*



A Not processed for mildew protection.
B Processed for mildew protection by a competitor.
C PROVAR PROCESSED Republic Fire Hose —no sign of mildew.

• • •

Unretouched photo showing results after samples were saturated with water and exposed to moist atmosphere for six months.

Mildew Problem SOLVED BY THE PROVAR PROCESS

★ Republic announces the PROVAR PROCESS—an exclusive method of treating the cotton jackets of fire hose for protection against the destructive action of mildew—far outstripping any previous effort in that direction by any manufacturer.

After being saturated in water and exposed to moist, warm atmosphere for six months, PROVAR PROCESSED Republic Fire Hose revealed no mildew deposit, no discoloration, no loss of strength or quality in the cotton jacket. The PROVAR PROCESS is permanent, it will not wash out after repeated use. It means longer life for fire hose under any storage conditions, greater economy and greater safety.

When specified, the PROVAR PROCESS will be applied to any grade of Republic Fire Hose *without additional cost.*

THE REPUBLIC RUBBER CO.
YOUNGSTOWN, OHIO

Republic FIRE HOSE

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READ through the advertising pages of FIRE ENGINEERING. They're your most dependable guide.

If what you want is not being advertised, turn to page 169 of this issue and use the coupon.

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SHUREDRY is the cover that fire chiefs all over the country have endorsed for superior service. Made of our special process chemically treated canvas, they resist both heat and cold. SHUREDRY covers will not crack or split on your storage shelves — easy to handle — give better service. SHUREDRY covers pay for themselves several times over in reducing water damage and are an essential part of the equipment of progressive chiefs everywhere.

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It will help if you will mention FIRE ENGINEERING *when writing advertisers*

FLOODS PARTIALLY SUBMERGE SEVERAL FIRE ALARM STATIONS

When Waters Receded, It Was Found that Alarm Apparatus Was Badly Damaged—Service Was Restored in Short Time

TURBLLENT flood waters from several great rivers in the northeastern section of the country during the latter part of March dealt many hard blows to the Fire Departments in communities located along its banks. No blow was more severe than that which crippled the communication systems of these departments at a time when the signal systems were badly needed.

Telephones were out of service everywhere for several days, and in many places fire alarm cables and street boxes were under water for varying periods. In at least one instance, a good size fire alarm central office was completely inundated and disabled. Yet, the rapid and intelligent way in which officials put their systems back into operating condition was nothing short of amazing. It demonstrated not only that these departments were organized to cope with almost any sort of emergency, but that the municipal fire alarm telegraph system is the only system of communication that could recover so quickly from such a catastrophe.

Emergency service was quickly rendered by one company to flood-swept cities.

Perhaps the city hit hardest in a fire alarm way, was Haverhill, Mass., where the fire alarm central office was located in a single story section of the comparatively new fire headquarters' building not more than a hundred feet away from the river bank. As the crest of the flood swept down the Merrimac River, it inundated the entire business district creating tremendous damage and establishing an all time record in the history of that city. Right in the river's path was the fire headquarters into which water, mud, oil, debris, creosote, etc., poured to a depth of more than six feet.

The entire fire alarm central office was engulfed in this manner for more than three days. After the water receded, it was found that the elements mentioned aided by the acid from the battery room, completely wrecked the fire alarm apparatus. Gamewell engineers responding to a hurry-up call from city officials, quickly sized up the damage and within twelve hours after the call for aid was received, delivered to the city a complete 10-circuit fire alarm central office. This was loaned to assist the city in recovering from its serious plight.

Alertness on the part of Chief Rufus A. Crittenden and William W. Bunce, Superintendent of Fire Alarm, enabled them to salvage enough rectfiers to tie together those fire alarm circuits that were not disabled directly by the flood waters, and feed enough current to them from a spasmodic power supply to keep these circuits alive, so that not a single fire alarm was lost because of the disaster. All street fire alarm boxes were in service throughout the flood period, except for ten which were totally under water.

Loading Emergency Fire Alarm Supplies at Gamewell Factory, Newton, Mass., for Shipment to Hartford, Conn.

Local Fire Department officials, with the aid of engineers and constructors, quickly set up the temporary office and replaced the ten disabled fire alarm boxes with another lot of new ones. Immediately following this temporary emergency hook-up several alarms were received, showing the value of having the service reestablished promptly. In the meantime a large portion of the city remained without telephone communication.

After the Flood Waters Had Passed On

The piles of mud that were deposited by floods outside fire headquarters at Haverhill, Mass. Note the high water mark on the building. Water flooded the interior for more than six feet and as much as eight feet of mud filled the basement when flood waters went down. Fire alarm apparatus is located in the single story section at the left.

Pittsburgh Meets An Emergency

When flood waters raced into the city of Pittsburgh, another emergency situation in Fire Department communication was established. Here the fire alarm office was left with its outside power supply cut off, but was able to obtain an emergency hook-up with one of the large steel mills. This averted an interruption in their fire alarm service, in this manner. While telephone service remained at a standstill, both the fire alarm and police signal systems remained in operation, except for a group of about twenty-five boxes that were completely under water for thirty or forty hours. Even some of these were operable when the water went down and one box, still slimy and with a hat

Wrecked Remains of Storage Battery Installation at Haverhill, Mass., After Flood Waters Had Receded

full of water trapped in the movement case, sent in its signal all right when the box was pulled.

Not one alarm was lost in Pittsburgh in all this period. Water supplies, electric power and transportation were badly crippled at that time and no telephones were operating. During this period the Fire Department had two five-alarm and four first-alarm fires to handle on the night of March 18. At one time the same night, only eight engine companies were available for service—all the others were working at fires. Within twenty-four working hours, twenty-five new fire alarm boxes were shipped to Pittsburgh to fill an emergency order.

At Johnstown, Pa., the city was also badly hit. The principal damage here was to circuits and boxes that were under water. A constructor was hastily dispatched to this city to help them put their fire alarm system back in operation quickly. A supply of magnets and emergency parts were also sent there.

Flood Troubles in New England

In New England, Hartford, Conn., was right in the path of the Connecticut River, which reached a record flood stage. Telephone communication was cut off in a large section of the city but Edward Sullivan, Superintendent of Fire Alarm, was able to connect the various fire stations together through the fire alarm cable, under direction of Chief Moran. The whole river district was under water, with the result that thirty-one boxes were submerged and all of the alarm and electrical equipment in one fire station was lost. Here the city's emergency flood lighting equipment was brought into play in order to supply current to the fire alarm batteries. Fifteen alarms were received from circuits, parts of which were entirely covered with water. Not one failure was experienced.

Thirty-two fire alarm boxes, thirty-odd sets of replacement magnets and a quantity of register paper were all delivered within twenty-four hours following the receipt of an emergency order from Hartford officials.

Nashua, N. H., received a quantity of magnets to replace those in boxes damaged by the flood. In a day's time two fire alarm boxes were replaced for Lawrence, Mass., and two more repaired. Orange, Mass., Tarantum, Pa., and many other cities and towns were able to put their systems back into operation promptly.

Among the Buffs

Secretaries of various box associations are urged to send news regarding their respective organizations.

Minneapolis Elects Officers

New officers of the Box 35 Associates, Minneapolis, were elected at the April meeting. Russell Jeirre resigned as Chief of the local fire fans.

Box 7 To Meet April 13

The next regular meeting of the Box 7 Association of Dayton, Ohio, will be held on Monday, April 13. Meetings are held the second Monday night of every month. R. C. Anderson, Secretary, and also Vice-President of the Buckeye Iron & Brass Works, extends an invitation to all buffs who may be in Dayton at that time, to attend the meetings.

Sutton New Member of Box 12

Box 12 Associates of Detroit, Mich., held its regular meeting on March 18 at the Quarters of Rescue Company 12. Eighteen members were present and the usual social evening followed. Jack Sutton, the newest member, was presented with a regulation Box 12 fire helmet. These helmets are presented to all new members and bear the insignia of the group.

Box 52 Meets

The spring issue of the *Box 52 Association News Letter* was distributed to members and guests who attended the meeting of the organization on the evening of March 18 in the Chamber of Commerce Building, Boston, Mass. The meeting was conducted by President P. H. Parker and Secretary C. Elmer Gane.

The speaker was Lawrence Colrick, of the Quincy office of the Massachusetts Registry of Motor Vehicles. He spoke on "Highway Safety," and a motion picture was shown on "Saving Seconds."

The "Janitor" Is Host

A meeting of the Firemen's Cycle Club was held at the home of Dr. Harry Archer, in West 85th Street. The widely known fire buff is "Janitor" of the club. Plans are being made for the fortieth anniversary which will be celebrated next fall.

Harry Belknap, Boston, presented some new pictures of some of Boston's winter fires. Chief Burke, the newly appointed head of the New York Fire Department's Marine Division was present and was cordially greeted. Richard Marshall, retired, who was in charge of the city's repair shops, was also among those present.

Fire Marshal Proposed for Westchester County

The appointment of a Fire Marshal for Westchester County, N. Y., was advocated by Wells Wise, Secretary, Westchester County Commission on Government, in an address before the regular meeting of the Fire Chiefs' Emergency Plan. The meeting was held at the fire house of the Weaver Street Fire Department, Town of Mamaroneck, N. Y., on the evening of Wednesday, March 18. The meeting was opened by President Krows, who called upon Chief Richard LeVino to welcome the members.

At the call of the Chair, the members stood in silence for one minute in memory of Ex-Chief Towle, "Father" of the Plan, and Ex-Chief John Rossner, both recently deceased.

Judge Hoop, Bronxville, called the attention of the members to some recent bills introduced into the New York Legislature. One of these provided for the appointment instead of election of Fire Commissioners. The Plan voted to oppose this bill. It was also voted to give the President and two Directors full power to act in cases of legislation if needful, when there is no time to submit matter to the Plan.

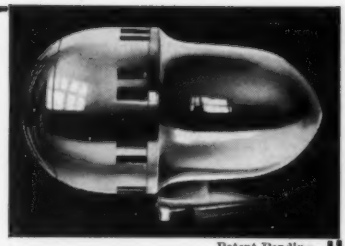
A paper was read by Chief LeVino, on "Selling the Fire Department to the Public," in which he advocated a closer touch with the citizens through publicity in local press, through civic associations and public school pupils.

Mr. Wise, in his address, emphasized the need of a Fire Marshal to carry on

THE NEW *and* IMPROVED

STREAMLINED

C-5



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WITH FLASHING LIGHT

With or Without Electric Brake

Triple action in this new, powerful streamlined C-5 Coaster is attributed to:

1. *SOUND of a new compelling tone.*
2. *LIGHT that flashes on and off with siren roar.*
3. *ECONOMY—it actually coasts for more than 120 seconds.*

■ *Think of it*—more than two minutes after current is shut off—that saves your battery. Greased sealed ball bearings—rugged in construction—fully chrome plated with strong candlepower light behind screened grille. Strong beams of light flashing on and off with siren roar floods streets with noise and light for blocks ahead, protecting lives, property and expensive fire fighting equipment.

LOUDEST BY TEST

■ The application of the electric brake by the simple touch of a button instantly silences the siren roar, especially when in a zone of quiet.

Ask about Free Trial offer.

FEDERAL ELECTRIC COMPANY

8702 SOUTH STATE STREET CHICAGO, ILLINOIS

UNION - MADE

Signal

FIREMEN'S UNIFORM SHIRTS

Styled Right
Priced Right

Cut full and roomy. Guaranteed not to shrink. Choice of medium blue, heavy fine yarn, fast-color sanforized chambray or navy blue tub-test percale. Two popular styles, Soft Collar Attached or Neckband with two Detachable Collars.

FIRE CHIEF'S SPECIAL

If you are interested in a standardized uniform shirt for your department and your dealer cannot supply Signals, write us. Give us size and style preferred and we will submit a sample shirt prepaid for your inspection and quote prices.

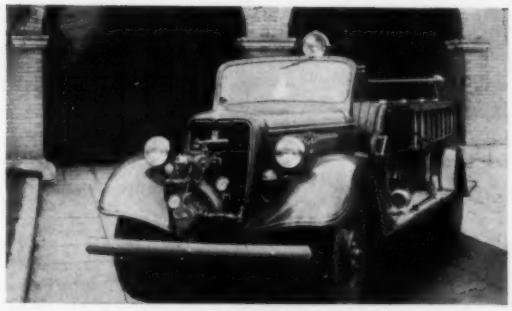
JOHN RISSMAN & SON

SIGNAL SHIRT DIVISION

305 W. Adams St. Chicago, Ill.

A NEW BARTON

CENTRIFUGAL FIRE PUMP



THE U-60...RATED 600 G.P.M.

The FIRST 600 Gallon Front-Mounted Fire Pump to Pass ALL Underwriters' Tests

Never before such wonderful performance—at such a surprisingly LOW PRICE! Note what this powerful pump will do . . .

From suction (standard ratings) the new U-60 will pump 600 gallons per minute—develop pressures up to 250 pounds. From city hydrants, it throws 750 to 900 G.P.M. Centrifugal type! . . . the dirtiest water can be handled safely! Automatically primed!

That's going some! But listen to another fact of equal importance. THE U-60, FRONT-MOUNTED ON A FORD V-8, PASSED EVERY UNDERWRITERS' TEST—easily, smoothly—no strain on motor. *No, Sir, when you select a U-60, it isn't necessary to buy a heavy expensive truck.* THIS SAVING ALONE RUNS INTO BIG FIGURES.

And economy of installation is a money-saver too. WITHOUT A SINGLE CHASSIS CHANGE, a U-60 can be Front-Mounted and made ready for service in a few hours—COSTING BUT A FEW DOLLARS.

THEN THERE'S THE BARTON GEAR-DRIVE, part of the Pump. With this drive, the truck motor operates at approximately ONE-HALF pump speed. You can turn a U-60 wide open for maximum performance, YET THE MOTOR LOAFS ALONG. **Thus, years are added to the life of your motor.**

Mr. CITY CHIEF, today you don't have to spend thousands upon thousands of dollars for large capacity pumping apparatus. Instead select a U-60 — AND SAVE YOUR TAXPAYERS PLENTY — or buy two for the price of one! Today, smaller towns as well can have the VERY BEST because the low-cost U-60 is well within their pocketbook range. Check coupon below for Bulletin 75A.

ALSO NEW BARTON F-4 and F-5 Fire Pumps at Still Lower Prices!

Another amazing development! sensational! . . . taking the country by storm! Both F-4 and F-5 Centrifugal Direct-Drive Pumps have PASSED ALL UNDERWRITERS' TESTS—YET SELL AT LOWEST PRICES ON RECORD for 400 and 500-gallon capacities. The only standard Barton U-Type feature they lack is Gear-Drive. Astounding values! Check Coupon for Bulletin 95.

Records show that more than nine out of every ten accidents are side-swipes. Head-on accidents are the exception; sides-swipes the rule. A FRONT-MOUNTED BARTON FIRE PUMP IS OUT OF THE DANGER ZONE. With thousands of Barton Pumps in service, we know of only one ever damaged by collision. FRONT-MOUNTING = CONVENIENCE + ECONOMY + GREATER SAFETY.

AMERICAN STEAM PUMP COMPANY, Battle Creek, Mich.

Million Dollar Manufacturer . . . Pumps and Pumps Only Since 1873

Please send me Bulletins as checked:

☐ No. 75A (Barton U-60, 600-gallon Gear-Driven Fire Pump.)
☐ No. 75 (Barton U-Type 350, 400 and 500-gallon Gear-Driven Fire Pumps.)
☐ No. 95 (Barton F-4 and F-5 Direct-Driven Fire Pumps.)

Name.....

Address.....

for Better Fire-fighting . . .

Fig. 900—Shut-Off Nozzle

Fig. 920—Leader Siamese with Gates

A Fire Department equipped with Buckeye products is ready for better fire fighting. All this equipment was designed from the "Fireman's viewpoint" rather than the manufacturer's—and so it is a thoroughly practical line.

For instance, there is a complete line of Shut-Off Nozzles with Buckeye's distinctive features. They *will not leak*. There is a type and size of nozzle to fit the needs of any department.

The Buckeye Expander is just what the Master Mechanic of every department has needed. One expander takes all segments from ¾" to 3", inclusive. Special sets of segments are available for attaching 2½" couplings to 3" hose.

The Single Gate Valve is substantially constructed to withstand the strain of quick opening and quick closing—and is, in every way, representative of Buckeye's ever-increasing line of Fire Department Equipment.

BUCKEYE IRON & BRASS WORKS
324 E. THIRD ST. DAYTON, OHIO

BUCKEYE
Shut-off Nozzles · Roto-Rays · Whistles

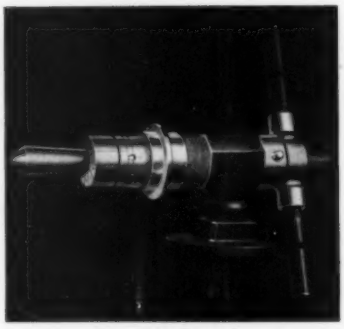


Fig. 926—Expander

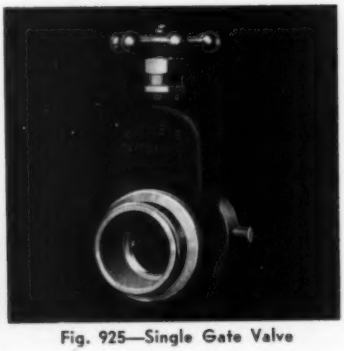


Fig. 925—Single Gate Valve

Replace Worn Coats NOW!
MIDWESTERN
FIREMEN'S COAT looks and wears well. Made of tough, pliable, waterproof Vanitex. The best looking, longest wearing coat in the fire service and every one comes with the famous Midwestern safety snap. The genuine Midwestern coat carries the double eagle label. Be sure to specify and get the real thing.
Write for catalog!
MIDWESTERN MFG. CO.
MACKINAW, ILLINOIS
Complete Line of Firemen's Clothing

WARD LA FRANCE
HIGHEST QUALITY
MOTOR FIRE APPARATUS
Send in your Specifications for Prices
•
WARD LA FRANCE TRUCK CORP.
ELMIRA, N. Y.

CAIRNS LOW HEAD— CUSHION LINED **HELMET**

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

DESIGN - - MATERIALS - - CONSTRUCTION
ALL PROVED RIGHT BY YEARS OF ACTUAL USE
Ask for Catalog 228
CAIRNS & BROTHER
444 LAFAYETTE STREET - Established 1836 - NEW YORK

Cover's Dupor Two Sponge Smoke Respirator

TWO large fine selected Sponges do the trick that one alone can't. At last, a successful *POCKET* Smoke Protector.

Price, $24.00 Dozen
Sample, $2.00, Postpaid

Address:
H. S. Cover, Station A
South Bend, Indiana
U. S. A.

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the work that the Plan had so well begun.

After considerable discussion pro and con, the Chair appointed a committee consisting of Judge Hoop, Chiefs Grabb, Chambers, Brennan and Ex-Chief Mulcahey, to confer with Mr. Wise on the subject.

As a Nominating Committee, President Krows appointed Chiefs Chambers, Wooley, Althouse and Captain Dawkins.

Chief Hubbard, of Greenwich, Conn., spoke of the coming convention of the Connecticut State Firemen's Association. It was decided that the Plan donate a cup to this convention and the matter was left in the hands of President Krows. Refreshments were served by the local department after the meeting. The next meeting will be held on the evening of April 15 at New Rochelle, N. Y., on invitation of Chief Grabb.

I. A. F. C. MEMBERSHIP DRIVE STIMULATES RIVALRY

District Organizations Vie With Each Other for Honors of Largest Membership Growth

AT the annual meeting of the Board of Directors of the International Association of Fire Chiefs, held in New York in February, plans were laid for a nation-wide drive for membership by the Association. State Chairmen have been appointed by Chief and Fire Commissioner John J. McElligott, New York Fire Department, and each Chairman will be supplied with literature to aid in enrolling new members in the Association.

In the meantime, the Pacific Coast Association, under the leadership of their Secretary, Jay W. Stevens, has beaten the gun and has already secured 26 new members.

The list of new members of the Pacific Coast Association follows:

E. F. Gardner, Chief Warden, Tamalpais Forest Fire Dist., Woodacre, Marin Co., Cal.
Wallace McCormack, Fire Department, Rio Vista, Cal.
W. I. Smith, Fire Department, Rio Vista, Cal.
Asst. Chief Chas. C. Parks, Fire Department, Yuma, Ariz.
Capt. W. S. Ingalls, 132 10th Ave., Yuma, Ariz.
Vincent L. Raffaele, 845 N. Alameda St., Los Angeles, Cal.
R. W. Truesdell, Chief Volunteer Fire Dept., Mullan, Idaho.
Commissioner Gerald A. Brinkman, Phillips & Norton Road, Chino, Cal.
C. H. Beckwith, Fire Prev. Eng., Shell Oil Co., Shell Bldg., San Francisco, Cal.
Asst. Chief Paul C. Gruber, 514 Hazel Ave., San Bruno, Cal.
Batt. Chief Griswold, 524 North Spring St., Los Angeles County, Cal.
Harry E. Strasser, Batt. Chief, Ret., 3404 32nd Street, San Diego, Cal.
W. L. Moore, Fire Prevention Eng., 1018 California Ave., Whittier, Cal.
Chief Arthur Wagner, Fire Department, Chino, Cal.
Chief Harold Case, 109 South 2nd St., Las Vegas, Nev.
Asst. Chief J. Briscoe, 703 E. Bay Avenue, Balboa, Cal.
Asst. Chief Paul Funchess, Fire Department, Carmel, Cal.
Bernard Rowntree, Fire Commissioner, Carmel, Cal.
Chief H. Bellinger, Fire Department, Fallon, Nev.
Lewis F. Lionvale, 1021 Insurance Exchange Bldg., San Francisco, Cal.
M. L. Monroe, Fire Marshal, Box 762, Corcoran, Cal.
Asst. Chief E. H. Stockwell, 517 Semple Avenue, Modesto, Cal.
Chief D. E. Rowan, Fire Department, Caliente, Nev.
C. E. Stewart, Deputy Coroner, Rio Vista, Cal.
Jack B. Tefft, Hoseman, Alvarado & Garey Ave., Pomona, Cal.
Lieut. Henry J. Casper, 3848 19th Street, San Francisco, Cal.

The Association has instituted many new activities in the past six months which will prove of great benefit to the fire service throughout the country, and it is believed that a record breaking growth in membership, as well as record breaker in the way of an annual convention, are assured.

The Convention will be held at Toronto, Ontario, on July 28 to 31, and the progress of the Membership Drive in the various district organizations up to convention time will be given monthly in these columns.

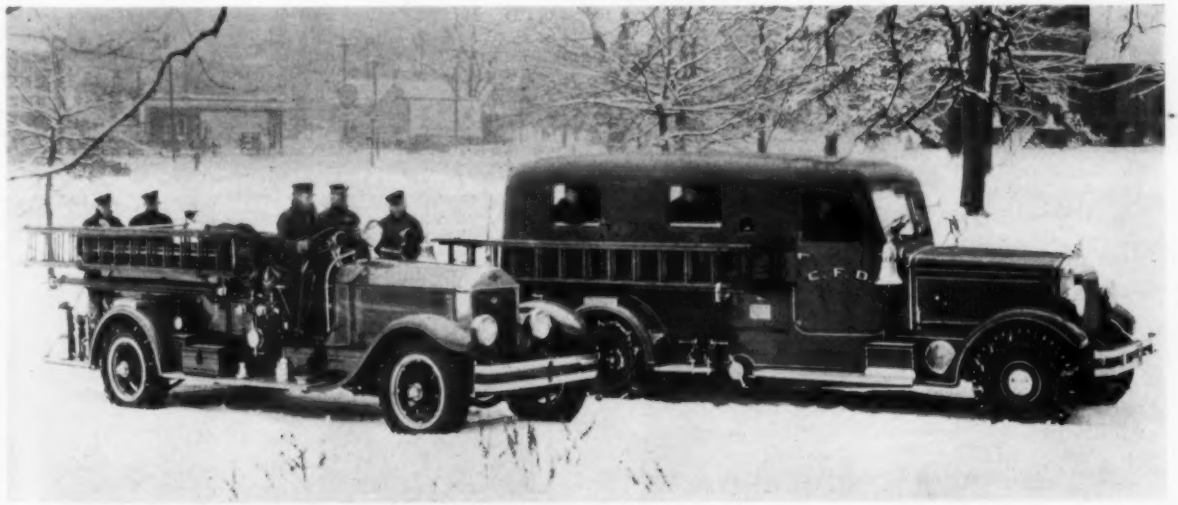
Eastern Chiefs to Meet July 10-11

At the meeting of the Board of Directors of the Eastern Association of Fire Chiefs, held at Poughkeepsie, New York, on March 28, the date for the annual Convention was set July 10-11. Poughkeepsie is the Convention City and the Nelson House will be the Headquarters' Hotel.

Meetings will be held at Vassar Institute.

Two features of special importance will be included in the program. The first will be a paper by former Chief John Kenlon, of the New York Fire Department, on marine fire protection. Chief Kenlon, in his early days, spent considerable time on the sea. After serving in the New York Fire Department for some years, he was given charge of the marine fleet. He is therefore particularly well fitted to conduct this subject. During the trial of the officers and officials of the "Morro Castle," recently in New York, Chief Kenlon was called in as an expert witness to testify on the subject of fire protection on boats.

The second topic of unusual interest at this time will be devoted to the work of fire departments during the recent floods in the East. Fire Chiefs located



Firemen of Charlotte, N. C., Learn Value of Enclosed Body for Fire Apparatus

A recent heavy snowstorm, which visited Charlotte, N. C., gave the crew of the country's only fully closed fire engine reason to be thankful for the enclosed body. They were snug and warm inside the Mack truck, while members of the other companies were exposed to the icy blasts.

in cities affected by the floods will have some interesting experiences to relate to those attending the Convention.

A number of other interesting topics are also planned and will be announced later.

Those in attendance at the Directors' meeting were: Chief Ross B. Davis, Philadelphia, Pa., President; Chief Charles E. Clark, Wayne, Pa., Secretary; Ex-Chief John Kenlon, New York City, Chairman Board of Directors; Chief Wm. J. Lutz, Wilmington, Del., Director; Chief Chris. Noll, Poughkeepsie, host to this year's meeting, and Fred Shepperd, Manager, Headquarters Office, International Association of Fire Chiefs.

Manufacturers' Announcements

Frank Stover, District Manager

Frank F. Stover has been appointed District Sales Manager of the midwestern sales territory of the Gamewell Company. He will have jurisdiction of the company sales in Michigan, Wisconsin, Minnesota, Iowa, North Dakota,

Frank F. Stover

South Dakota, Nebraska, Illinois, Missouri, Indiana, Kentucky, Tennessee and western Ohio.

Mr. Stover will be assisted by George A. Jackson, Assistant District Sales Manager, and Joseph M. Briggs and Chester W. Call, Sales Engineers.

He started with the company while still in his teens and represents the third generation of the Stover family in the fire alarm field. After some construction department work, he joined his father as an assistant in the sales field.

Mr. Stover will be located at 407 South Dearborn Street, Chicago.

Better School Protection

Chief Michael J. Fleming, Albany, N. Y., has had installed in one of the public schools a Garrison fire alarm system. Two small wires are strung along the ceiling of all floors of the school. When the temperature reaches 160 degrees, one wire opens, spouting a chemical on the other, and an alarm is turned in. During a test of this system, a fire was started in the basement of the school, and an alarm was sounded forty-three seconds later.

Ahrens-Fox and LeBlond-Schacht Companies Merge

A merger of The LeBlond-Schacht Truck Company and The Ahrens-Fox Fire Engine Company was ratified by stockholders of the two companies in Cincinnati on March 30. This plan brings under one roof two of the oldest automotive concerns in the country—the fire engine company continuing as a branch of the truck company, maintaining the Ahrens-Fox name.

Harold R. LeBlond, Secretary-Treasurer states: "The new company will continue to supply all parts and equipment for apparatus now in service and will continue to manufacture rotary, centrifugal and piston types of pumps. The additional manufacturing facilities and ample financial resources will enable the Ahrens-Fox Company to continue its outstanding record as manufacturers of fire fighting equipment. The management pledges itself to a continuation of the unparalleled Ahrens-Fox service."

The present executive personnel will continue, both Mr. Fox and Mr. Ahrens being nationally known figures in pioneering improvements and innovations in fire-fighting apparatus.

The Ahrens-Fox Company is the outgrowth of the company which manufactured the first steam fire engine in Cincinnati in 1853. The present company was incorporated in 1905. Mr. Fox has been a leader in the industry for more than 40 years, while Chris Ahrens, father of the present Vice-President, was associated with early development of the steam fire engine.

The LeBlond-Schacht Company was founded by G. A. Schacht, one of the pioneers in the automotive industry. The company was incorporated in 1913 as the G. A. Schacht Motor Truck Company. The name was changed in 1927. Prior to the advent of the automobile, Mr. Schacht was engaged in the manufacture of ball bearing buggies.

Atlanta, Ga., Wins Fire Waste Contest

At the annual meeting of the Chamber of Commerce of the United States to be held at Washington, D. C., Atlanta, Ga., will receive the grand award for the best fire prevention record in 1935 among 327 competing cities. The contest is conducted each year by this group and the National Fire Waste Council.

Six winners, in different population classes, will receive plaques. They are:

Class I. Cities of more than 500,000 population—Philadelphia.
Class II. Cities of 250,000 to 500,000 population—Atlanta.
Class III. Cities of 100,000 to 250,000—Hartford, Conn.
Class IV. Cities of 50,000 to 100,000—Lakewood, Ohio.
Class V. Cities of 20,000 to 50,000—Parkersburg, W. Va.
Class VI. Cities under 20,000 population—Geneva, N. Y.

The per capita fire loss of the competing cities in the contest was $1.23, the lowest in the history of the contest, which has been conducted annually for the past twelve years. The average per capita fire loss of the competing cities for the years 1930-1934 was two dollars. The total fire loss of the cities reporting in 1935 was $41,248,699 as against an average of $65,299,552 in the five-year period ending with 1934. The reduction indicated by these figures shows a saving to the citizens of the participating cities of $24,050,853.

N. F. P. A. Meets in May

The fortieth annual meeting of the National Fire Protection Association is to be held at Atlantic City, N. J., May 11-14. There will be meetings of the Fire Marshals' Section, Marine Section, Insurance Division of the American Management Association, and of the Railway Fire Protection Association.

Chief George Sinclair, Toronto, Ont., is opposing the efforts of certain people to have additional fire stations closed for economy reasons. Chief Sinclair said that he would not take the responsibility for high losses that would be sure to follow, if any more stations were closed.

Charles H. Fox
President, The Ahrens-Fox Fire Engine Company

John P. Ahrens
Vice-President, The Ahrens-Fox Fire Engine Company

William Schacht
President, The LeBlond-Schacht Truck Company

Harold LeBlond
Secretary-Treasurer, The LeBlond-Schacht Truck Company

Be Completely Prepared

So that you can handle *any* type of fire when you roll in.

The new, enlarged GARRISON plant is now turning out the world's most effective and complete line of MOTOR FIRE APPARATUS—Pumping Engines (all capacities)—Hose Cars—Ladder Trucks—Flood Lighting Apparatus—Emergency and Airport Crash Apparatus—all engineered in accordance with the latest, most modern practice in automotive design, and with important features found in no other unit.

COMPLETE
Fire Control Service

To handle *any* type of fire quickly and effectively. And reduce fire losses.

GARRISON DRY METHOD of fire extinguishment

Quick, effective control of fires in grease, oil, gasoline, paint, lacquers and electrical equipment

Proving Itself Daily!

Write for interesting details of extinguishments. And for Complete Catalog.

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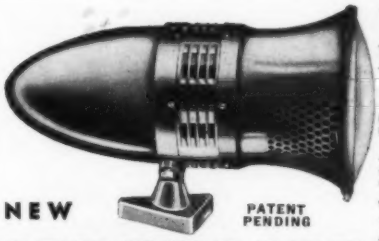

NEW PATENT PENDING

SIRENLITE

Combination No. 20 Siren and Powerful Red Flashing Light. Price—$49.50.

You can **HEAR** *and* **SEE IT!**

A powerful siren and light combined. The most practical warning device for all apparatus. A precision built instrument, same sturdy construction as all Sterling Sirens. Write for bulletin.

The Sterling Siren Fire Alarm Co., Inc.
ROCHESTER, N. Y.

HALE pump designs have been and are being copied. Experience has taught us that in these copies something is always neglected or not properly carried out.

While these copies may resemble Hale pumps, they do not actually have the performance and flexibility of Hale pumps.

FIRE PUMPS HALE CONSHOHOCKEN PA

HALE FIRE PUMP CO., Inc.
CONSHOHOCKEN, PA.

Signaling efficiency

begins at the box

OBSOLETE, uncertain fire-alarm boxes hinder signal efficiency . . . may endanger lives. Horni positive non-interfering boxes are up-to-date, efficient, dependable. Made to meet the needs of modern fire-alarm signaling, these boxes include important new improvements. Mail this coupon below for a comprehensive, interesting booklet, giving complete information on all types of Fire-Alarm Equipment.

Exclusive HORNI Features

- Lift-up single action door and pull.
- Protected movement under sealed glass cover.
- Sealed against elements, dusts, insects.
- Easily accessible terminal block.
- New design—simplified movements.
- Quickly available interchangeable parts.
- Spring capacity for 10 four round alarms or more.

Room 1553, Graybar Bldg., 420 Lexington Ave., N.Y.C.
Gentlemen:
Please send us full information on modern Fire-Alarm Boxes and other equipment.

GraybaR
OFFICES IN 78 PRINCIPAL CITIES.

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FLAT CURED— WAX and GUM TREATED—

Any type you want!

Quaker City makes a complete line of fire hose in a wide price range—but every foot of it is made to give you the best service you can get in its price class. For a complete list of brands and prices write us anytime—

QUAKER CITY RUBBER CO.
PHILADELPHIA, PA.

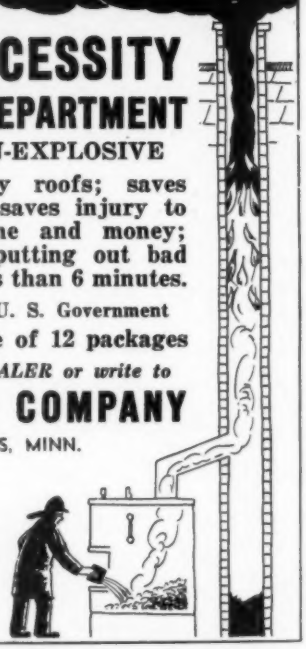
SOOT BLAST
Puts out chimney fires

A vital **NECESSITY**
IN EVERY DEPARTMENT
NO ZINC - NON-EXPLOSIVE

Saves climbing icy roofs; saves chemical damage; saves injury to firemen; saves time and money; cuts fire loss by putting out bad chimney fires in less than 6 minutes.

Now being used by U. S. Government
Price $4.50 per case of 12 packages
See your LOCAL DEALER or write to
The STEBIS COMPANY
MINNEAPOLIS, MINN.

SOOT-BLAST
Also comes put up in 100 lb. bags at $12.50 per bag.



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All the manufacturers you will find represented in our advertising pages have interesting and valuable data about their equipment which is yours for the asking. When writing, be sure to mention FIRE ENGINEERING.

RED COMET STOPS FIRE AUTOMATICALLY

and is now protecting hundreds of homes, stores, industrial plants, warehouses, garages, filling stations, automobiles, trucks and busses in every state in the Union, in Alaska, Canada, and in hundreds of Fire Departments.

We want Fire Department men to represent us!

We have splendid openings in some territories where we particularly want Fire Department Men to represent us. Commissions are good—and we have a complete line of Automatics, Manual Grenades, Pump Guns, Soda-Acid and Foams in 2½ Gallon Size, Chemical Engines, Fire Sirens, and unusually good Fire Department Hose.
If you have any time on your present job, be sure to write us for Free Facts and complete information, which will be sent you without any obligation.

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902 Red Comet Building — Littleton, Colorado

W. S. DARLEY & CO.
ESTABLISHED 1908
Makers of
Fire Pumps
and
Fire Apparatus
EVERY ONE A CHAMPION

CONVENTION DATES

April 15—FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Fire Headquarters, New Rochelle, N. Y. Secretary, Walter M. Dawkins, P. O. Box 341, Port Chester, N. Y.

April 20-22—FLORIDA STATE FIREMEN'S ASSOCIATION. 11th Annual Convention, Key West, Fla. Secretary, F. C. Pfaender, Winter Haven, Fla.

May 4-5—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. 9th Annual Convention, Atlanta, Ga. Secretary-Treasurer, Chief R. S. Baughan, Fire Department, Norfolk, Va.

May 4-6—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 14th Annual Convention, and Fire School, Albuquerque, N. M., exact dates to be decided later. Secretary-Treasurer, Theodore A. Rosenwald, Albuquerque, N. M.

May 6-8—GEORGIA STATE FIRE COLLEGE. Annual Fire College, Atlanta, Ga. Director, Harry Phillips, Assistant Fire Marshal, Dept. of Fire, 166 Alabama St., S.W., Atlanta, Ga.

May 11-15—NATIONAL FIRE PROTECTION ASSOCIATION. 40th Annual Meeting, Atlantic City, N. J. Secretary-Treasurer and Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 26-29—IOWA FIRE SCHOOL. 12th Annual School, Ames, Ia. Director, Lindon J. Murphy, Municipal Engineer, Iowa State College, Ames.

May 27—IOWA STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Ames, Ia. Secretary-Treasurer, Chief L. R. Morris, Ames.

June—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 31st Annual Convention, Camden, S. C., exact date to be decided later. Secretary-Treasurer, John H. Wohlers, Chief, Fire Department, Charleston, S. C.

June—NEVADA STATE FIREMEN'S ASSOCIATION. 1st Annual Convention, Reno, Nev. Secretary, Norman Brown, Carson, Nev.

June 1-3—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Enid, Okla. Secretary-Treasurer, Charles Slemp, 1701 Northeast 63rd Street (Box 69-A), Oklahoma City, Okla.

June 9-12—ANNUAL FIRE COLLEGE, ILLINOIS FIREMEN'S ASSOCIATION. 12th Annual Fire College, University of Illinois. Director, L. H. Provine; Secretary, Assistant Chief Roy W. Alsip, Fire Department, Champaign, Ill.

June 10-12—NORTHERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Carthage, N. Y.

June 10-11—NORTHERN INDIANA INDUSTRIAL AND VOLUNTEER FIREMEN'S ASSOCIATION. 31st Annual Convention, Garrett, Ind. Secretary, Russell Rowe, Garrett, Ind.

June 17—NORTHWESTERN OHIO FIREMEN'S ASSOCIATION. 63rd Annual Convention, Bowling Green, Ohio. Secretary, J. W. Gardner, Ashland, Ohio.

June 17-20—WASHINGTON STATE FIREMEN'S ASSOCIATION. 14th Annual Convention and Fire School, Tacoma, Wash. Secretary, Lyle J. Ficklin, Kalama, Wash.

June 20—LEBANON COUNTY FIREMEN'S ASSOCIATION. 14th Annual Convention, Newmanstown, Pa. Chief Fire Marshal, A. S. Stauffer, Palmyra, Pa.

June 20—NASSAU COUNTY FIREMEN'S ASSOCIATION. 30th Annual Parade and Tournament, Westbury, L. I., N. Y. Secretary, James McInnes, Syosset, L. I.

June 22-23—MISSOURI VALLEY CHIEFS' ASSOCIATION. 2nd Annual Convention, Black Hawk Hotel, Davenport, Ia. Secretary-Treasurer, Chief Ray Tiller, Waterloo, Ia.

June 22-25—COLORADO STATE FIREMEN'S ASSOCIATION. 6th Annual Fire College (June 22-23) and 20th Annual Convention (June 24-25), Manitou, Col. Secretary, Clinton Turnbull, 215 Boston Bldg., Denver, Col.

June 22-26—SOUTH DAKOTA FIRE SCHOOL. 7th Annual School, Brookings, S. D. Secretary, M. C. Sullivan, Parkston, S. D.

June 23-25—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 47th Annual Convention, Middletown, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

June 23-25—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 14th Annual Convention, Hartford, Conn. Headquarters, Hotel Bond; Exhibits, Armory, Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass.; Chairman, Exhibit Committee, Chief Daniel B. Tierney, Arlington, Mass.

June 23-25—FIRE CHIEFS' ASSOCIATION OF OHIO. 19th Annual Convention, Steubenville, Ohio. Secretary-Treasurer, Chief Philip J. Harty, Fire Dept., Youngstown Sheet & Tube Company, Youngstown, Ohio.

June 24-26—MARYLAND STATE FIREMEN'S ASSOCIATION. 44th Annual Convention, Hagerstown, Md. Secretary, George R. Lindsay, Hagerstown, Md.

July 4-11—ALLEGHENY COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. 22nd Annual Convention, Mt. Oliver, Pa. (Parade, July 11). Secretary, A. H. Leck, McKees Rocks, Stowe Township, Pa.

July 7-10—PROVINCE OF QUEBEC POLICE AND FIRE CHIEFS' ASSOCIATION. 4th Annual Convention, Grand'Mere, Que., Can. Secretary-Treasurer, Chief Robert Harrington, Fire Dept., McColl-Frontenac Oil Co., Ltd., Windsor Hotel, Montreal.

July 10-11—EASTERN ASSOCIATION OF FIRE CHIEFS. 9th Annual Convention, Nelson House, Poughkeepsie, N. Y. Secretary, Charles E. Clark, Box 217, Wayne, Pa.

July 27-30—WEST VIRGINIA FIRE SERVICE EXTENSION SCHOOL. 6th Annual School, West Virginia University, Morgantown, W. Va. Director, D. L. McElroy, at the University.

July 28-31—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 64th Annual Convention, Hotel Royal York, Toronto, Ont. Recording Secretary-Treasurer, Ex-Chief James J. Mulcahey, 16 Franklin Ave., Yonkers, N. Y.; Chairman, Exhibit Committee, Chief Roy B. Mottesheard, Dearborn, Mich.

Aug.—CENTRAL DISTRICT FIREMEN'S ASSOCIATION. Annual Convention, one week, date to be announced later. Secretary, Gilbert Coble, P. O. Box 366, Punxsutawney, Pa.

Aug.—UTAH STATE FIREMEN'S ASSOCIATION. 36th Annual Convention, Ogden, Utah. (Exact date to be decided later.) Secretary, John J. Creedon, P. O. Box 25, Bingham Canyon, Utah.

Aug. 4-6—WISCONSIN PAID FIREMEN'S ASSOCIATION. 29th Annual Convention, Waukesha, Wis. Secretary, William Schultz, Sheboygan, Wis.

Aug. 11-13—INDIANA FIREMEN'S ASSOCIATION. 20th Annual Convention, Terre Haute, Ind. Secretary, Burley Marshall, P. O. Box 725, Terre Haute, Ind.

Aug. 17-20—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 14th Annual Convention, Lodi, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Ave., San Diego, Cal.

Aug. 18-21—FIREMEN'S ASSOCIATION OF STATE OF NEW YORK. 64th Annual Convention, Tonawanda, N. Y. Secretary, Fred A. Davis, Fort Edwards, N. Y.

Aug. 31-Sept. 3—NATIONAL MUNICIPAL SIGNAL ASSOCIATION. 41st Annual Convention, Hotel Pennsylvania, New York City. Secretary, W. H. Harth, Columbia, S. C.

Oct. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 49th Annual Convention, Pekin, Ill. Secretary, Assistant Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Dougherty Addresses Fairfield County Chiefs

Thomas F. Dougherty, Former Assistant Chief of the New York Fire Department, was the principal speaker at the regular monthly meeting of the Fairfield County Fire Chiefs Emergency Plan, which was held at the Community House of the Old Greenwich, Conn., Presbyterian Church. The meeting was presided over by President Gisborne, who is Chief of the Sound Beach (Old Greenwich) Fire Department. In opening his remarks, Chief Dougherty emphasized the importance of the fireman knowing the layout of all structures in his district. He said this is the day of education in the Fire Service. The address, the Chief said, would be divided into three parts: First, ventilation; second, the direction of hose streams, and third, overhauling and salvage work. He told of the first idea he had of ventilation, when he had attended a smoky fire as a young fireman back in 1912. It was then the duty of the second due truck company to open up a building. Instead of entering the fire room, he had gone directly to the roof and opened it up, and the results had been so striking that he had later constructed a model to illustrate the principle of at once ventilating a building to allow the smoke and hot gases to escape. A larger model had later been used by him in the Fire College, with Chief Kenlon's approval. He cited several instances on his experience where serious loss of life had occurred through lack of proper ventilation.

Chief Dougherty then referred to the importance of the proper direction of streams from a water tower or deck pipe. He told of one instance where a powerful stream from a tower had been directed into the window of a burning structure, only to pass through a window in the rear, and never touch the fire. He said that the same thing applied to the use of a hand nozzle. If not properly deflected, the stream would simply prove useless and a waste of water. It is up to the Chief to see that all streams are used effectively and to best advantage.

Ex-Assistant Chief Thomas F. Dougherty

In the matter of overhauling, it is of the utmost importance to avoid a rekindle, after the fire has been extinguished. It is well to dip articles that have been on fire in a tub of water, rather than to pour water upon them, so as to avoid damage. The Chief also referred to the need for proper education in the dangers of gasoline. A rising vote of thanks was given Chief Dougherty, at the conclusion of his address.

The Plan was welcomed by Mayor O. D. Tuttle, of Old Greenwich, and Ex-Chief Sullivan, of Greenwich, Selectman, and Chief Moorehouse, President Mid-Hudson-Harlem Valley Fire Chiefs' Association, also spoke.

Henry Skenk, Commissioner, League of Municipal Education, told of plans for the education of firemen in New England. It was voted to endorse the proposed plan and to send a delegation to attend the demonstration.

Five new members were elected.

The following committees were announced by the Chair: Nomination—Chiefs Carroll, Brencher, Knickerbocker Peterson and Captain Sanger. Banquet—Chiefs McNamara, Hubbard, Potter, Boyle, Cutter and Scully.

Refreshments were served by the local department after the meeting.

FALSE ALARMS

Courtesy, Brooklyn Daily Eagle

"These amateur hours are driving the Chief nuts!"

CAUSE AND EFFECT

A fat, jovial fireman was coming down the stairs of a fire station, when he met a rather thin man, whom he knew, coming up.

"From the looks of you," he remarked, "there might have been a famine."

"And from the looks of you," answered the thin one, "you might have caused it."

The promoter was advised that the best place to hold the fair was around the waist.

NO NUDISTS

An old fire house order was found which was issued in Providence, R. I., in 1801. It read:

"When the fire bell rings, all male members of the town must repair immediately with buckets to the fire, taking care, if in the night, to put on their clothes before they go out."

A NOMAD

It was a night fire. Several persons were rescued from the apartment house, families became separated, and in general there was bedlam. A patrol wagon had taken a number of the rescued to the police station where they would be protected against the severe cold.

A reporter was on hand to take the names of some of those rescued. A woman, believing him to be some kind of an official, rushed up to him all excited.

"I've lost my husband. A fireman took me down the ladder, but I don't know if my husband escaped."

"Calm yourself, madam. Can you tell me what he looks like."

"Oh, yes," she answered. "He's very dark, rather tall, and has a Roman nose."

The reporter shook his head rather gravely and said, "In that case, madam, you'll never see him again."

"Why?"

"Because a Roman nose never turns up."

MONETARY READING

A doctor from the nearby large city had been invited to address the local department on the value of first aid and rescue work. The Chief, who was somewhat of a social light, had his wife write to the doctor and invite him for dinner that night. A reply was received in the customary illegible hand of a physician.

The wife was puzzled. Was the doctor coming, or did he write that he could not come?

"My dear," said the husband, "why don't you take the letter down to the drug store. After all, they are used to reading the handwriting of the medical profession."

So she took the letter to the druggist. He looked at it a moment and then disappeared in the back part of the store.

He came out a short while later, handed her a small bottle, and said:

"Fifty cents, please."

TOO MUCH RISK

It was the recruit's first fire. Untried, but young and eager, he waited for orders. The Chief stepped up to him and said:

"Climb up that ladder to the eighth floor, crawl along the cornice to the fourth window, and catch that wooden sign you see dangling there. Then swing yourself along to the second window, break the glass, and go in and see if there's anyone about. . . . Well, what are you waiting for?"

"Pen and ink," he replied. "I want to hand in my resignation."

WIFE TROUBLE

As the fireman started to leave the station, at the end of his shift, he noticed an intoxicated man, rather well dressed, leaning up against the building. He thought he would direct him on his way.

"Buck up, old fellow," he said as he attempted to straighten him up. "Hadn't you better take the street car home."

"Sh' no ushe. Wife wouldn't let me keep it in the house."

BEAT THE BLAST

A volunteer fireman, more ambitious than wise, rushed into a shop where trouble had been reported. It was dark and he couldn't see his way about. He struck a match, and as there was a gas leak in the rear of the store, there was a terrific blast and the would-be helper was blown out through the open door.

A passer-by rushed to his assistance. After helping him to his feet, the victim was asked if he was hurt.

The man gazed back at the store which was now afire. He said, "No, I'm not hurt, but I got out only just in time."

Drawing by "Art" Espey

"Sure, I be the Fire Chief all right, young feller. But the joke's on you. I want to buy hoes."

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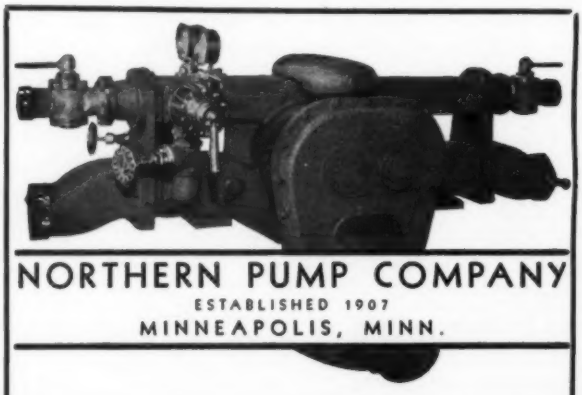

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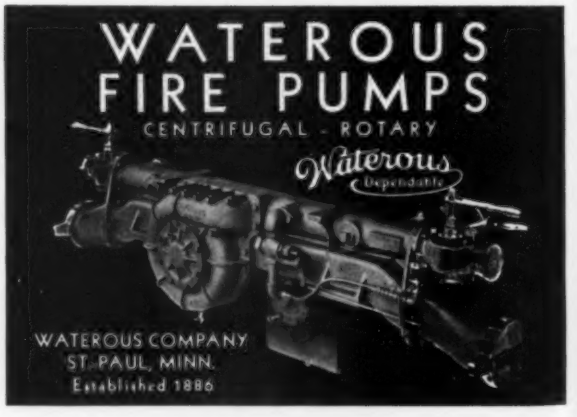

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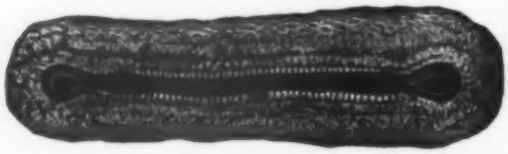

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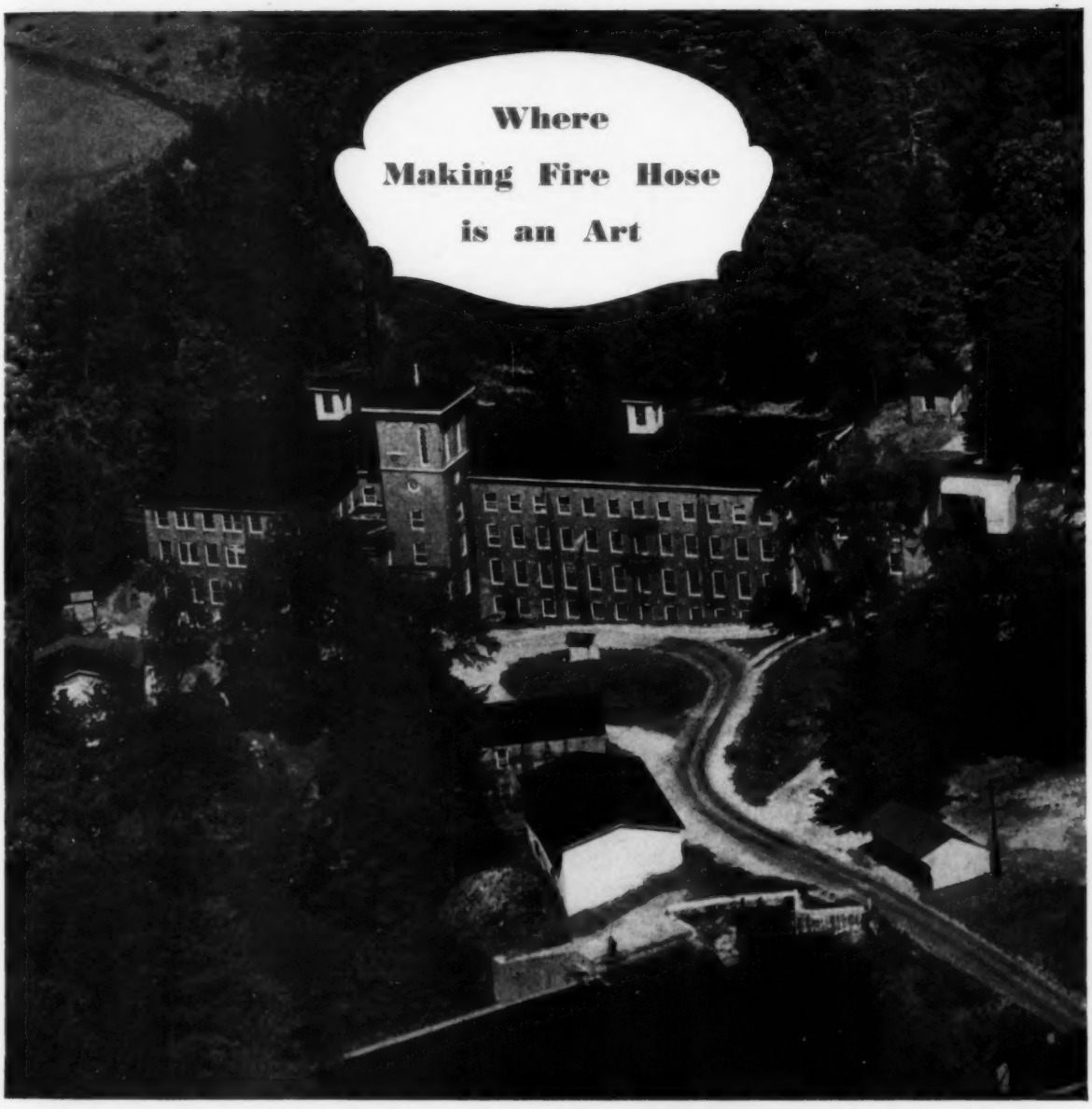

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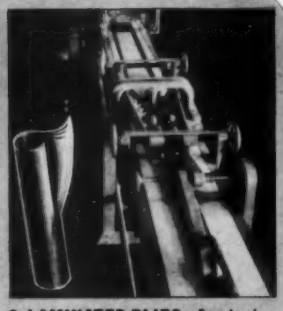

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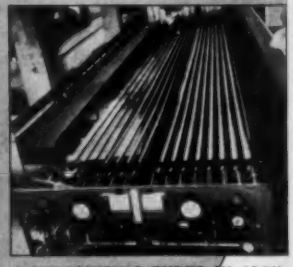

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